

COUNTY BOROUGH OF WARRINGTON.

ANNUAL REPORT

TO THE

EDUCATION AUTHORITY

ON

SCHOOL HYGIENE

FOR THE YEAR 1920,


BY

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Medical Officer of Health
and School Medical Officer.

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TO THE EDUCATION AUTHORITY OF THE
COUNTY BOROUGH OF WARRINGTON.

LADIES AND GENTLEMEN,

I beg to submit to you my Eighth Annual Report on School Hygiene, viz., that for the year 1920.

The form and scope of this Report is somewhat altered from previous ones in accordance with the arrangement suggested to School Medical Officers by the Board of Education in order to ensure uniformity in the mode of presentation of the work of the School Medical Service throughout the country. At the same time, owing to the very urgent need for economy, every endeavour has been made to abbreviate the Report, and, where possible to avoid repetition, reference is made to those of previous years.

The work in our Schools consists of much more than Medical Inspection, and it is noteworthy that during the year the title of the Sub-Committee controlling the work was altered from Medical Inspection Committee to that of School Medical Service Committee.

I have included an interesting chart (for which I am indebted to the Director of Education (Mr. J. Moore Murray), which gives a diagrammatic representation of the work of supervising the health of the school children in this town.

During the period under review there were examined at the Routine Medical Inspections 3,813 children (see page 49 *et seq.*). In addition, 6,104 children were examined by the doctor at various special inspections either in the Schools or at the Clinic, making a total of 9,917 children medically examined (exclusive of re-examinations).

The number of defects found at Routine Inspection was 1,103, and out of these 918 or 83.2% received satisfactory treatment up to the end of the year.

No less than 26,853 attendances of 3,500 school children were made at the Clinic for the treatment of various minor ailments (see page 18, &c.).

A special inquiry was conducted during 1920 into the causation and incidence of crippling among the children of Warrington, and particulars of this are given on pages 36 to 48.

Dr. Paulusz ably carried on the duties of Assistant School Medical Officer during the year, and I have to thank him for summarising many of the statistics that follow.

The work of the School Dental Officer and the four Nurses is referred to in the body of the Report (pages 17 and 24).

Mr. Flood, Chief Sanitary Inspector, has given me much valuable assistance in investigating the sanitary condition of the Schools.

I wish to convey my thanks to Mr. J. Moore Murray, the Director of Education, for assistance in collecting certain information.

I have much pleasure in stating that there has been that hearty co-operation between the officials of the Education Department and the Health Department during the past year that is necessary for the due carrying out of the work detailed in this Report.

Lastly, I would like to place on record my appreciation of the cordial support always rendered to me by the Members of the School Medical Service Committee and the Local Education Authority.

I am, Gentlemen,

Your obedient servant,

G. W. N. JOSEPH.

March, 1921.

1.—STAFF.

The Staff engaged in the School Medical Service in Warrington is as follows:—

1. **School Medical Officer** (who is also Medical Officer of Health) is responsible for general supervision of the work, and in addition examines various special and defective children referred to him.
2. **One Assistant School Medical Officer** (who is also Assistant Medical Officer of Health), five-sixths of whose time is engaged in school work.

He undertakes the Routine Medical Inspection of the children in the schools, the examination of special cases attending at the Clinic, and assists in directing the treatment of the children by the School Nurses at the Treatment Clinic.

3. **One Dental Officer**, the whole of whose time is devoted to the inspection and dental treatment of school children.
4. **Four School Nurses**, who devote the whole of their time to school work. They carry out the treatment advised for children attending the Clinic (see page 18), visit the homes of the scholars to give advice to parents if required, and assist in the inspections in the schools (see also page 17).
5. **Clerical Staff** in Education Department, five in number.
 - (a) **Clinic Registration Clerk.** Keeps the cards and registers of children attending Clinic. Sends daily report of "First Attendances" and cases certified "Fit for School" to Education Office. Prepares weekly "Did not attend list."
 - (b) **Dental Clerk.** Arranges for Dental Inspections at the schools and dental treatment at the Clinic.
 - (c) **Medical Inspection Clerk.** Arranges for and attends Medical Inspection at Schools. Arranges for further examination and re-examination of children at Clinic and the treatment of defects of vision and nose and throat at the Infirmary.
 - (d) **Special Officer.** One of the School Attendance Officers visits "Follow up" cases. Collects the cost of spectacles from parents of children prescribed for by the Oculist. Summons cases to appear before School Medical Service Committee. Lays information with Magistrates' Clerk in cases where prosecution is ordered. Visits "Spectacles" cases reported by Head Teachers.
 - (e) **Medical Inspection Clerk** (part-time). Generally supervises the work of the Clerical Staff.

In addition, the part-time services of two private practitioners are indirectly obtained for treating cases of defective eyesight and enlarged tonsils and adenoids, through our agreement with the Warrington Infirmary for dealing with such cases.

Furthermore, a large part of the time of one inspector and one clerk in the Health Department is occupied in dealing with cases of infectious or suspected infectious disease occurring among children attending the Schools in our Borough (see page 16).

2.—CO-ORDINATION WITH OTHER HEALTH SERVICES.

There has always been close co-operation between the work of the School Medical Service and that of the local Health Department.

(a) **Infant and Child Welfare.**—Records are kept by the Health Visitors of all children from birth to 5 years of age, and the information thus gained is at the disposal of the School Medical Officer when the child reaches school age.

The arrangement is that on the first of each month the Record Cards of all children, attaining the age of 5 years during the succeeding month, are sent to the Education Office so that any important items of the history of the case may be entered on the child's School Medical Schedule Card.

(b) **Tuberculosis.**—All school children suffering from or suspected to be suffering from tuberculosis are referred to the Medical Officer of Health in his capacity of Tuberculosis Officer and come under the general supervision of our Dispensary system whether attending school or not.

(c) Special precautions are taken in order to try and discover as early as possible any cases of defects that may lead to crippling, and this work embraces children of all ages up to 14 years (see also pages 36 to 48).

(d) There is the closest co-operation between the School Attendance Officers and the Sanitary Inspectors to whom all cases of suspected infectious disease are reported.

3.—SCHOOL HYGIENE.

A Review of the hygienic conditions of the Schools in the area, with particular reference to their surroundings, ventilation, lighting, warming, equipment and sanitation, was given in the Annual Report for 1919 and previous years.

No structural alterations or additions were undertaken, but the following is a list of the Schools that were decorated during the year 1920:—

| | |
|-------------------|--------------------------|
| St. Barnabas'. | Wycliffe. |
| Evelyn Street. | Oakwood Avenue. |
| Latchford R.C. | Parochial (to complete). |
| Arpley Street. | St. Benedict's. |
| Secondary School. | |

4.—MEDICAL INSPECTION.

The Routine Medical Inspections are conducted by the Assistant Medical Officer during the mornings at the various schools in the Borough.

The arrangements made for carrying out this work have been detailed in earlier Reports.

In addition to these routine examinations, a large amount of inspection work is also carried out by the Doctor in the Clinic in the afternoons in examining special cases, or cases excluded from school for treatment at the Clinic or in re-examining children as to the results of treatment (see page 12).

A Diagrammatic representation of the work is given in the Chart at the beginning of the Report.

(a) **Age Groups Inspected.**—School children in Warrington are medically examined at least three times during their period of attendance at an elementary school, viz., during their 5th, 8th and 13th years. These are referred to as the “Entrant,” “Intermediate” and “Leaver” groups of children.

Altogether, 3,813 children were thus dealt with in 1920, and statistics are given in Table I. on page 49.

(b) The Board’s schedule of Medical Inspection has been followed in every instance.

(c) Steps are taken to secure the early ascertainment of crippling defects.

As may be expected, one of the main functions of the School Doctor is to be constantly on the alert in order to discover at the earliest possible moment any signs of those ailments and defects which, if neglected, are so prone to lead to crippling of the child.

School Medical Inspection has proved, however, that many of these cases have been caused by factors acting long before the child reaches school age.

We have therefore the closest co-operation between the Staff of the Health Department and the School Medical Service in this matter. A short memorandum on the causes of crippling has been drawn up by the Medical Officer of Health and supplied to all members of the Staff of the Health Department, including the School Nurses, and a special card is used for recording particulars of every child from birth to 14 years of age who is found at any time to be suffering from or to have suffered from certain diseases or defects.

These children are then kept under special supervision (see Report on crippled children, page 46).

(d) There was no disturbance of school arrangements involved by the routine medical inspections (Article 43(b) of the Elementary Education Provisional Code, 1919), and all inspections were carried out on the school premises (Article 44(b)).

5.—FINDINGS OF MEDICAL INSPECTION.

The following is a brief review of the facts revealed by the routine medical inspection. For the statistics relating to the year's work reference must be made to Table II. appended to this Report (page 50).

(a) **Uncleanliness.**—During 1920 a very marked improvement was noted in the cleanliness of the children examined.

Out of the total children inspected only 5.3% were found to have verminous heads (*i.e.*, nits or pediculi, or both). Compared with recent years the proportion is shown as follows:—

| | | | | |
|------|-----|-----|-----|--------|
| 1916 | ... | ... | ... | 10% |
| 1917 | ... | ... | ... | 10.73% |
| 1918 | ... | ... | ... | 15.8% |
| 1919 | ... | ... | ... | 11.2% |
| 1920 | ... | ... | ... | 5.3% |

The proportion varies, but improvement is noticeable in all age periods, and this is all the more noteworthy as the standard adopted was, if anything, higher than usual:—

2% among entrants (5 years) compared with 8.1% (1919).

5.9% among the intermediate group (8 years)
compared with 12% (1919).

7.2% among the leavers (13 years)
compared with 15.8% (1919).

In large measure this improvement is due to the work of the School Nurses (see “ Surprise Visits,” page 25).

(b) **Minor Ailments.**—As a rule, few minor ailments are discovered at the Routine Medical Inspection, as most of the obvious cases of contagious disease, such as impetigo, conjunctivitis, ringworm, &c., are excluded as soon as discovered by the teachers and attend at the Inspection Clinic (see page 18 *et seq.*).

In 1920, 1.8% of the children were found to be suffering from impetigo and .15% from ringworm of the scalp, compared with 1.74% and .16% respectively the previous year.

In addition, 20 children were found at the routine inspection to be suffering from itch (scabies) and excluded until cured.

(c) **Tonsils and Adenoids.**—In 79.2% of the children examined, there was no defect of the nose and throat.

The tonsils were much enlarged in 6.2% and marked adenoids were present in .47% of cases.

Altogether, 338 children were referred for treatment of defects of the nose and throat.

(d) **Tuberculosis.**—Three children (or .07%) were found who were suspected to be suffering from early tuberculosis of the lungs.

This figure, of course, does not represent the percentage of tuberculous children in the Borough.

A better idea of the real amount of tuberculosis in Warrington among school children is to be gathered from the notifications received under the Public Health Tuberculosis Regulations, 1912.

The following table shows the number of school children suffering from different forms of the disease who were living in the Borough on the 31st December, 1920:—

| | | | | Attending school. | | Not attending school. | | Total. |
|---------------|----|-----------------|--------|-------------------|---------|-----------------------|----------|--------|
| | | | | Males. | Females | Males. | Females. | |
| Tuberculosis | of | Lungs | ... .. | 34 | 23 | 8 | 7 | 72 |
| " | " | Glands | ... .. | 32 | 37 | 6 | — | 75 |
| " | " | Peritoneum | ... .. | 23 | 10 | 1 | 3 | 37 |
| " | " | Skin | ... .. | 2 | 2 | — | — | 4 |
| " | " | Spine | ... .. | 5 | — | 4 | 1 | 10 |
| " | " | Hip | ... .. | 7 | 2 | — | 1 | 10 |
| " | " | Ankle | ... .. | 1 | 3 | 1 | — | 5 |
| " | " | Knee | ... .. | 1 | 2 | 2 | — | 5 |
| " | " | Foot | ... .. | 1 | — | — | — | 1 |
| " | " | Clavicle | ... .. | — | 1 | — | — | 1 |
| " | " | Ribs | ... .. | — | 1 | 1 | — | 2 |
| " | " | Elbow | ... .. | 2 | — | — | — | 2 |
| " | " | Tibia | ... .. | 1 | 1 | — | — | 2 |
| " | " | Brain | ... .. | 2 | — | — | — | 2 |
| " | " | Finger and hand | ... .. | 2 | — | — | 1 | 3 |
| " | " | Abscesses: Leg; | ... .. |  |  |  |  |  |
| | | Neck, Arm ... | ... .. | 1 | 1 | 1 | 1 | 4 |
| Totals | | | | 114 | 83 | 24 | 14 | 235 |

These cases are kept under observation by the Medical Officer of Health and his Staff (see also page 16).

(e) **Skin Disease.**—Reference is made under Minor Ailments to the cases of impetigo, ringworm and scabies discovered.

(f) **External Eye Disease.**—Comparatively few cases of conjunctivitis and blepharitis were found compared with previous years, although the standard adopted was, if anything, higher, and even the slightest cases not requiring exclusion were asked to attend “after school” hours at the Clinic.

(g) **Vision.**—The eyesight of boys and girls in the first age group is not tested excepted in exceptional circumstances.

The following is a summary of the results found during 1920:—

| | | |
|---|--------|--------------|
| Total number of children whose vision was examined | ... | 2776 |
| Number of children with normal vision both eyes | ... .. | 980 (35.3%) |
| Number of children with good vision (not less than 6/9 both eyes) | ... .. | 1095 (39.4%) |
| Number of children with fair vision (not less than 6/12 and without eye-strain) | ... | 180 (6.4%) |
| Number of children whose vision was corrected by glasses | ... | 160 (5.7%) |
| Number of children requiring treatment | ... .. | 361 (13%) |

The percentage found to require treatment in 1919 was 8.1%.

(h) **Ear Disease and Hearing.**—34 cases of aural discharge were found at routine inspection and 26 cases among the specials requiring treatment. In addition, 29 cases of deafness owing to obstruction due to wax in the ears were discovered.

(i) **Dental Defect.**—The School Medical Officer refers to the Dental Officer for treatment all children with four or more decayed teeth or any children who are obviously suffering from lack of attention to the mouth. In this connection 71 children were dealt with. This does not by any means represent the number of children requiring dental treatment, but only the most urgent ones. For particulars of the routine inspections made by the Dental Officer reference must be made to pages 54-55.

(j) **Crippling Defects.**—2 cases of serious heart disease, 2 of tuberculosis of bones and joints and 8 of rickets were found at routine inspection. A special inquiry into crippling defects was conducted during the year and is printed on pages 36 to 48.

(k) **Nutrition.**—The average height and weight for each age period for the past 10 years was published in 1919. For 1920 the high average of the past few years has been maintained.

| | 5 year olds. | | | 8 year olds. | | | 13 year olds. | | |
|-------------|--------------|---------------|--|--------------|---------------|--|---------------|---------------|--|
| | av. ht. | av. wt. | | av. ht. | av. wt. | | av. ht. | av. wt. | |
| | ft. ins. | st. lbs. ozs. | | ft. ins. | st. lbs. ozs. | | ft. ins. | st. lbs. ozs. | |
| Boys | 3 4.5 | 2 9 3.1 | | 3 8.7 | 3 6 13.4 | | 4 6.4 | 4 13 9.8 | |
| Girls | 3 3.1 | 2 8 4 | | 3 8.7 | 3 6 13.4 | | 4 5.6 | 4 13 7.5 | |

As regards nutrition the following table summarises the findings of medical inspection:—

| | | | Above Normal. | Normal. | Below Normal. | Markedly Defective. |
|--------------------|-----|-----|------------------|---------|------------------|------------------------|
| Infants—Girls | ... | ... | 41 | 449 | 9 | 3 |
| Boys | ... | ... | 43 | 496 | 4 | 3 |
| Intermediate—Girls | ... | ... | 19 | 617 | 19 | 4 |
| Boys | ... | ... | 16 | 670 | 18 | 5 |
| Leavers—Girls | ... | ... | 72 | 631 | 26 | 6 |
| Boys | ... | ... | 63 | 604 | 13 | 6 |
| Total | | | 254 | 3467 | 89 | 27 |
| | | | (6.6%) | (90.3%) | (2.3%) | (.7%) |

Further examination of cases selected at the Inspections in the Schools.

The further examination of certain cases is made at the Inspection Clinic when necessary. These cases consist of children whom it is impossible to examine thoroughly during the Routine examination.

In 1920, 588 such cases were examined.

Special Cases.—In addition to the children notified for examination at the Routine inspection, various children were specially examined during the year.

The teachers submit any special case to the doctor at the time of the inspection in the schools, or special cases may at any time be sent to the School Clinic.

Apart from the children attending for treatment at the Clinic (see page 18), the A.S.M.O. examined 427 children specially in the schools, with the results shown in the Summary in Table I.

Other Medical Inspection Work.

In addition to the Routine inspection work and the examinations of children in the schools in the mornings, a large amount of work is done by the School Medical Officer at the Clinic every afternoon.

The sources from which the cases are derived were detailed on page 34 *et seq.* in the Report for 1919.

| | | | |
|---|-----|-----|------------------|
| “Specials” examined at Clinic | ... | ... | 251 |
| Cases of contagious disease (including suspected cases submitted by Teachers) | | | 5394 |
| Cases submitted by School Attendance Officers | ... | ... | 32 |
| Further examinations | ... | ... | 588 |
| Re-examinations | ... | ... | 1401 |
| | | | <hr/> 7666 <hr/> |

6.—INFECTIOUS DISEASES.

The measures taken to prevent the spread of infectious disease have been the same as in previous years and will not be detailed here.

The number of cases of **Notifiable** infectious disease occurring among school children during 1920 is shown in the following table:—

| Year. | Scarlet Fever. cases | Diph- theria. cases | Enteric Fever. cases | Pulmon- ary Tuber- culosis. cases | Other Tuber- cular Diseases cases |
|-------|--------------------------------|-------------------------------|--------------------------------|---|---|
| 1920 | 67 | 44 | 1 | 14 | 29 |
| 1919 | 96 | 71 | 1 | 11 | 34 |

The next table shows the number of cases of **Non-Notifiable** infectious disease, although this does not represent the total number of cases occurring in the town among school children, but only those that came to our notice :—

| Year. | Whooping cough cases. | Chicken- pox cases. | Mumps cases. | Sore throat cases. | Measles. cases | German Measles. cases |
|-------|-----------------------------|---------------------------|-----------------|--------------------------|-------------------|-----------------------------|
| 1920. | 110 | 713 | 95 | 416 | 1244 | 2 |
| 1919. | 44 | 242 | 1225 | 417 | 860 | 12 |

The General Order making Measles a notifiable disease was rescinded in December, 1919, but it was left to Local Authorities to apply for a local Order if it was considered desirable for the area.

Our experience of the General Order showed that we obtained information of practically all the cases among school children through our arrangements in the schools without compulsory notification, so that application was made to the Ministry of Health for a Special Order for the compulsory notification of cases of Measles occurring in children under school age only. This was approved and came into force on the 1st of April, 1920.

During the early part of 1920 there was an epidemic of chickenpox, and at the close of the year whooping cough became more prevalent.

School Closure was not resorted to as a preventive measure for any outbreak of infectious disease in 1920 (Articles 45(b) and 57 of the Code).

Closure is resorted to only in very exceptional circumstances, because as soon as the schools are closed one of our most valuable sources of information regarding sickness amongst the child population is cut off.

In order to minimise as far as possible the risk of conveying infection to school certain children are referred daily to the Medical Officer of Health. These cases consist of

- convalescents from infectious disease;
- contacts with infectious disease;
- children who are suspected of infectious disease;
- children suffering from sore throats;

and the numbers dealt with in 1920 are shown in the next table:—

**CHILDREN EXAMINED BY MEDICAL OFFICER OF HEALTH AS TO
FREEDOM FROM INFECTION.**

| Disease. | Number of Examinations | Cases Detected. | |
|---|---------------------------|-----------------|------------|
| | 1920. | 1919. | |
| | | Scarlet fever. | Diphtheria |
| SCARLET FEVER (Convalescents examined as to their fitness to return to School.) | 73 | — | — |
| DIPHTHERIA Ditto. | 50 | — | — |
| CONTACTS with cases of Diph- theria examined previous to being allowed to attend School after case removed to Hospital. | 110 | — | 5 |
| SORE THROATS (examined previous to being allowed to attend School). | 425 | — | 10 |
| Totals | 658 | — | 15 |

Deaths from Infectious Diseases and all other causes among children of school age during the past six years are given in the following table:—

| Cause of death. | 1915. | 1916. | 1917. | 1918. | 1919. | 1920. |
|----------------------------------|-------|-------|-------|-------|-------|-------|
| Scarlet Fever | 15 | — | — | 2 | — | 1 |
| Diphtheria | 9 | 3 | 1 | 3 | 8 | 3 |
| Enteric Fever | 1 | — | — | — | — | — |
| Measles | 2 | 1 | 5 | — | — | 1 |
| Whooping Cough | 1 | 2 | — | 4 | — | — |
| Diarrhoea | 1 | — | — | — | — | — |
| Tuberculosis of Lungs | 7 | 13 | 9 | 4 | 7 | 2 |
| Other Tubercular Diseases | 10 | — | 6 | 5 | 6 | 8 |
| Influenza | — | — | — | 26 | 11 | 3 |
| All other causes | 39 | 39 | 37 | 46 | 26 | 31 |
| Totals | 85 | 58 | 58 | 90 | 58 | 49 |

Exclusions.—All children suffering from contagious disease who may be a danger to the other children, and all cases in which the condition necessitates absence from school are at once excluded by the A.S.M.O. at the time of his inspections. Slight cases are not excluded, but referred for treatment after school hours. The following are the cases excluded during 1920, compared with 436 cases the previous year :—

| | | | | | Excluded. | After School. |
|---------------------|-----|-----|-----|-----|-----------|---------------|
| Uncleanliness— | | | | | | |
| Head | ... | ... | ... | ... | 225 | 39 |
| Body | ... | ... | ... | ... | 9 | 58 |
| Ringworm— | | | | | | |
| Head | ... | ... | ... | ... | 2 | 7 |
| Skin | ... | ... | ... | ... | 4 | 17 |
| Scabies | ... | ... | ... | ... | 18 | 2 |
| Impetigo | ... | ... | ... | ... | 37 | 62 |
| Other Skin Diseases | ... | ... | ... | ... | 16 | 71 |
| Blepharitis | ... | ... | ... | ... | 29 | 44 |
| Conjunctivitis | ... | ... | ... | ... | 8 | 16 |
| Corneal Ulcer | ... | ... | ... | ... | 1 | — |
| Aural Discharge | ... | ... | ... | ... | 20 | 40 |
| Other Ear Diseases | ... | ... | ... | ... | — | 29 |
| Scarlet Fever | ... | ... | ... | ... | 2 | — |
| Sore Throat | ... | ... | ... | ... | 18 | 4 |
| Defective Clothing | ... | ... | ... | ... | 2 | 10 |
| Defective Footgear | ... | ... | ... | ... | 5 | 68 |
| Chorea | ... | ... | ... | ... | 1 | — |
| | | | | | 397 | 467 |

The foregoing table refers to defects, and the actual number of children affected was :—

| | | | | |
|--------------------|-----|-----|-----|-----|
| Exclusions | ... | ... | ... | 382 |
| After School cases | ... | ... | ... | 453 |

BACTERIOLOGICAL EXAMINATIONS.

Examinations made for the detection of Diphtheria :—

| Year. | | Number of | | Positive | | Negative |
|-------|-----|--------------------|-----|----------|-----|----------|
| | | Examinations made. | | Results. | | Results. |
| 1913 | ... | 200 | ... | 7 | ... | 193 |
| 1914 | ... | 197 | ... | 5 | ... | 192 |
| 1915 | ... | 123 | ... | 6 | ... | 117 |
| 1916 | ... | 195 | ... | 6 | ... | 189 |
| 1917 | ... | 191 | ... | 3 | ... | 188 |
| 1918 | ... | 110 | ... | 1 | ... | 109 |
| 1919 | ... | 96 | ... | 1 | ... | 95 |
| 1920 | ... | 329 | ... | 15 | ... | 314 |

The following table shows the number of visits paid by the Sanitary Inspectors to the homes of school children in investigating and supervising outbreaks of infectious disease :—

| | |
|---|------|
| To premises where cases of Scarlet Fever, Enteric Fever, or Diphtheria occurred | 112 |
| Re-visits to ascertain if contacts with Scarlet Fever, Enteric Fever and Diphtheria were free from infection and fit to return to School | 114 |
| Re-visits to cases of Scarlet Fever, Diphtheria or Enteric Fever being treated at home | 56 |
| Visits to premises where there were cases of Measles | 1612 |
| Re-visits to homes where cases of Measles are being treated | 1036 |
| Visits to homes of children reported by Education Department as being absent from School, owing to either Whooping Cough, Chickenpox, or Mumps | 1278 |
| Re-visits to homes of children suffering from either Whooping Cough, Chickenpox, or Mumps | 1534 |
| Visits to homes of children absent from School with Sore Throat or Suspicious Rash | 502 |
| Visits to homes where there were cases of Influenza or Pneumonia | 191 |
| Visits to homes of children suffering from Pulmonary and Non-Pulmonary Tuberculosis | 946 |
| Total | 7381 |

7.—“ FOLLOWING-UP ” OF CHILDREN SUFFERING FROM PHYSICAL DEFECTS AND WORK OF THE SCHOOL NURSES.

A large amount of work is done annually in following up the cases to see that the defects found at Routine Inspections and at other special examinations of the children are dealt with promptly and satisfactorily.

The procedure adopted has been fully explained in previous Reports.

The Tables at the end of the Report show the results obtained, but no record is given of the actual number of re-examinations made in each case by the doctor, or of the number of visits paid by the Nurses and School Attendance Officers (see also page 31) in advising parents and in offering facilities for treatment.

Only as a last resort are parents summoned to attend before the School Medical Service Committee for not obtaining satisfactory treatment for the children (see page 30).

Work of the School Nurses.

In addition to the very large amount of work carried out by the School Nurses in treating the cases in the Clinic under the supervision of the School Medical Officer, they have performed the following duties during 1920.—

| | |
|--|------|
| Visits to homes of children (in many cases assisting with treatment) | 3532 |
| Attendances at Routine Medical Inspection in the Schools with the A.S.M.O. ... | 108 |
| Notices sent to teachers with reference to excluded children | 2792 |
| “Surprise visits” to Schools (see page) | 115 |
| Administered nasal douches in cases of tonsils and adenoids after operation... | 354 |
| Assisted in the Dental Clinic when necessary. | |

But the mere formal representation by statistics of their routine work does not, by any means, do full justice to them.

Their activities are such that it is impossible to keep a record of the way in which their services are helping in the improvement of the home as well as of the scholar.

The “surprise visits” to the Schools have been of the greatest value in raising the general standard of cleanliness amongst the scholars and are referred to more fully on page 25.

Nurse Griffiths was appointed in March in place of Nurse Teare, who resigned early in the year. In order to cope with the work, a fourth Nurse—Miss Parker—was appointed in September. Together with Nurse Mason and Nurse Brown, they have performed their many and arduous duties in a very thorough manner.

8.—TREATMENT OF DEFECTS OF CHILDREN DURING 1920.

Whenever the circumstances warrant it, cases are induced to obtain treatment from a private medical practitioner.

Arrangements have been made, as detailed in previous Reports, for dealing with minor ailments and dental defects at our School Clinic, and with visual defects and defects of the nose and throat at the Local Infirmary. Cases of uncleanness receive attention mainly in their own homes under the supervision of the School Nurses.

Tables summarising the work done under the various headings are given at the end of the Report (page 56).

A.—Minor Ailments.

The cases of minor ailments that attended the School Clinic were as follows:—

| | | | | No. of Children. | No. of Attendances. |
|-------------------|-----|-----|-----|---------------------|------------------------|
| Aural Discharge | ... | ... | ... | 176 | 703 |
| Ringworm: Skin | ... | ... | ... | 148 | 978 |
| „ Scalp | ... | ... | ... | 167 | 11142 |
| Conjunctivitis | ... | ... | ... | 292 | 1510 |
| Impetigo: Skin | ... | ... | ... | 970 | 4358 |
| „ Scalp | ... | ... | ... | 492 | 2551 |
| Blepharitis, etc. | ... | ... | ... | 167 | 758 |
| Miscellaneous | ... | ... | ... | 1088 | 4853 |
| Total ... | | | | 3500 | 26853 |

As soon as it was thought there was no risk to the patient or other children in attendance some of the above cases were allowed to return to school and to come to the Clinic out of school hours.

The average length of treatment found necessary to render a child fit to return to school is shown as follows:—

| Disease. | No. of cases treated in School Clinic | Total No. of attendances. | Cases in which treatment completed. | | | | |
|-----------------------|--|------------------------------|-------------------------------------|------------------------|--|------------------------------------|---|
| | | | No. of cases. | No. of attendances. | Average no. of attendances per case. | No. of days under treatment. | Average no. of days necessary for treatment. |
| Aural Discharge | 85 | 241 | 85 | 241 | 2.8 | 280 | 3.2 |
| Ringworm Skin | 126 | 796 | 126 | 796 | 6.3 | 941 | 7.4 |
| Ringworm Scalp | 167 | 11142 | 112 | 4769 | 42.5 | 7151 | 63.8 |
| Conjunctivitis | 265 | 1362 | 265 | 1362 | 5.1 | 1928 | 7.2 |
| Impetigo Skin | 779 | 3720 | 779 | 3720 | 4.7 | 4607 | 5.9 |
| Impetigo Scalp | 492 | 2551 | 492 | 2551 | 5.1 | 3269 | 6.6 |
| Blepharitis, &c. | 129 | 601 | 129 | 601 | 4.6 | 751 | 5.8 |
| Miscellaneous | 750 | 3751 | 750 | 3751 | 5.0 | 4442 | 5.9 |

In last year's Report (page 38) will be found a summary of the average periods taken to render a child suffering from minor ailments fit to return to school.

This summary covers the last six years, and, on referring to it, it is noteworthy that in 1920 the average duration of treatment of these ailments is the shortest on record except in the case of ringworm of the scalp.

It will be observed, too, that the average length of treatment has diminished gradually from year to year. For instance, in 1915 the average number of days under treatment of cases of impetigo of the skin was 8.7 days, of conjunctivitis was 25.04 days, of blepharitis was 17.8 days, whereas during last year the periods were 7.4, 7.2 and 5.8 days respectively.

This reduction has been due mainly, I think, to our policy of daily supervision of such cases at the Clinic, and as the primary object is to benefit the child, this reduction is all to the good, as the sooner the case is cured the less the risk of complications and the less the risk of affecting others.

When, however, we compare the number of children affected and the number of school attendances lost each year for the past five years, as in the following table, we find little if any reduction:—

RETURN showing the number of children affected and the number of attendances lost in consequence of contagious diseases during the years 1916, 1917, 1918, 1919, and 1920.

| | RINGWORM. | | IMPETIGO. | | CONJUNCTIVITIS. | | AURAL DISCHARGE. | | UNCLEANLINESS. | | OTHER AILMENTS | | TOTALS. | |
|------|------------|---------------|------------|---------------|-----------------|---------------|------------------|---------------|----------------|---------------|----------------|---------------|------------|---------------|
| | Chil-dren. | Attend-ances. | Chil-dren. | Attend-ances. | Chil-dren. | Attend-ances. | Chil-dren. | Attend-ances. | Chil-dren. | Attend-ances. | Chil-dren. | Attend-ances. | Chil-dren. | Attend-ances. |
| 1916 | 282 | 10324 | 1195 | 28022 | 656 | 17082 | 134 | 3411 | 313 | 4483 | 654 | 17193 | 3234 | 80515 |
| 1917 | 293 | 9751 | 1356 | 31707 | 435 | 9494 | 79 | 1702 | 275 | 3434 | 652 | 13617 | 3090 | 69705 |
| 1918 | 266 | 10421 | 1641 | 39482 | 1503 | 30737 | 121 | 2171 | 354 | 7083 | 660 | 14559 | 4545 | 104453 |
| 1919 | 271 | 9847 | 1711 | 36296 | 775 | 17023 | 163 | 2880 | 479 | 6495 | 480 | 10851 | 3879 | 83392 |
| 1920 | 603 | 21091 | 1277 | 26427 | 471 | 8904 | 87 | 1045 | 729 | 6816 | 754 | 18672 | 3921 | 82955 |

It might be urged, therefore, that the measures taken had not tended to prevent these ailments, but that there had been an increase in the number of children affected. This may be so and may be accounted for partly by the increased number of children in the schools, the higher standard of inspection adopted, the closer co-operation of the teachers in our work, and the tendency for some families to make too much use of the Clinic (as mentioned in my last Report).

Without in any way lessening the benefit to be derived by the children, but in order to mitigate to some extent the financial loss, which, after all, is a serious matter, it is necessary that these ailments should be treated sooner, that parents must attend to small defects in their earliest stages, and that there must be no inducement for the child to delay recovery in order to stay away from school.

To endeavour to accomplish this we propose to introduce during 1921 a system which will reduce very much the number of children excluded from the schools and the numbers attending at the Clinic. It is suggested that all the schools in the Town should be visited by a School Nurse at least twice a week and that all minor ailments that do not warrant the exclusion of the child should be attended to by the Nurse on the occasion of her visit.

Only those children will be excluded for attendance at the Clinic in which attendance at school would be risky either to the sufferer or to the other children.

The four School Nurses will be employed as follows:—

Nurses I. and II.

To visit schools daily, morning and afternoon. On Saturday visit homes and do clerical work, &c.

Nurse III.

To assist at Routine Medical Inspections in the morning. To work in Clinic during afternoon.

Nurse IV.

To attend to special work in Clinic in the morning (*e.g.*, ringworm cases, nasal douches, preparation of lotions, &c.). To work in Clinic during afternoon.

Two Nurses will always be in attendance at the schools, one at work in the Clinic every morning and two every afternoon. Periodically the nurses will change from one set of duties to another.

The main object of this scheme is to try to discover and treat the cases at the earliest possible moment. In addition, one large group of cases will be avoided—the “fit for school first attendance at Clinic” group—the children excluded by Teachers as possibly contagious but who are found fit for school when examined at the Clinic. It may safely be said that an average of 3 school attendances is lost for each of these children at present.

Furthermore, when certain parents and children discover that “sores on the face” don’t necessarily mean absence from school there will be less inducement to neglect treatment in the early stages.

Ringworm of the Scalp.—There was not only an increase in the number of cases dealt with, but the average duration of treatment was 63.8 days, an increase compared with 1919, in which it was 52.03 days.

The drug treatment of this disease is unsatisfactory, although the most efficacious we found was the preliminary application of the sodium chloride and vaseline ointment mentioned in a recent report of the Board’s Chief School Medical Officer. It is very essential that X-ray treatment should be available for the children suffering from ringworm of the scalp, and it is hoped to make arrangements shortly for a private practitioner in the Town to undertake this work. Not only will this result in a gain both for the child and the Local Authority on account of school attendance, but it will enable the School Nurses to undertake other work during the mornings that are at present devoted to dealing with such cases.

B.—Treatment of Visual Defects.

From the table on page 54 it will be seen that 777 children were referred for refraction, of which 208 were cases from the previous year.

Out of these, 452 were satisfactorily dealt with, leaving 322 yet to be examined.

Under the Education Authority’s scheme, arrangements have been made for refraction work to be carried out at the Warrington Infirmary (details in 1917 Report). This has proved satisfactory so far as it goes, and has enabled us to cope with 238 cases of children who would otherwise have been unable to obtain treatment. Saturday mornings are allotted to the work, but owing to the number of necessary re-examinations of old cases, many new cases are still awaiting attention.

I am indebted to Dr. Fox, who carries out the work at the Infirmary, for the following summary:—

| | Hypermetropic | | Myopia. | Myopic Astig- matism. | Mixed Astig- matism. | Total |
|--|---------------------|-------------------|---------|--------------------------|----------------------------|-------|
| | Hyper- metropia. | Astig- matism. | | | | |
| Vision improved ... | 53 | 60 | 14 | 28 | 3 | 158 |
| Vision not improved | 38 | 1 | — | 1 | — | 40 |
| Defective Vision not due to errors of refraction ... | 23 | — | — | — | — | 23 |
| Normal Vision, or 6/9 | 17 | — | — | — | — | 17 |
| | 131 | 61 | 14 | 29 | 3 | 238 |

(In 1919, 276 cases were treated.)

Squint present in 23 cases and operations performed when required.

| | | | |
|---------------------------|----------|-----------------------|----------|
| High myopia .. | 3 cases. | Optic atrophy | 2 cases. |
| Cataract | 2 cases. | Corneal opacities ... | 5 cases. |
| Congen. defects of Retina | 2 cases. | Old accidents | 2 cases. |

Spectacles are provided by the Local Authority at cost price, and in necessitous cases parents are allowed to pay for them by easy instalments.

In order to ensure that the child wears glasses regularly after they have been prescribed, each case is notified to the teacher and entered in the School Spectacles Register.

If the child fails to wear the spectacles regularly the case is reported by the teacher to the Education Department, visited by a School Attendance Officer, and, if necessary, followed up in the usual way.

C.—Treatment of Defects of Nose and Throat (see page 54).

Altogether, 529 cases (of which 191 were brought forward from the previous year) were referred for treatment of defects of the nose and throat, mainly adenoids and enlarged tonsils. This treatment is not necessarily operative in every instance and only where the child shows signs of deafness, of marked nasal obstruction, or other serious defect an operation is advised.

Of the 529 cases, 378 cases received satisfactory treatment, 239 of these undergoing an operation. The remaining 151 will be dealt with in 1921, compared with 191 similarly brought forward from 1919 and treated this year.

The delay is mainly due to the fact that cases are kept under observation for a considerable time in order that we may ascertain that the condition is not a temporary one.

Our arrangements with the Warrington Infirmary (detailed in 1917 Report) include the operative treatment of all cases of enlarged tonsils or adenoids in school children referred by us and considered by the Surgeon to require it.

About six cases are referred to the Infirmary each week, and the work is carried out by Dr. Binns, who has kindly furnished the following table :—

| Defect. | Satisfactory after Operation. | | Unsatisfactory after Operation | | Totals. | | Grand Total. |
|----------------------------|-------------------------------|-----|--------------------------------|----|---------|-----|--------------|
| | B. | G. | B. | G. | B. | G. | |
| Tonsils | 51 | 75 | 2 | 5 | 53 | 80 | 133 |
| Tonsils and Adenoids | 10 | 15 | 2 | — | 12 | 15 | 27 |
| Adenoids | 29 | 16 | — | — | 29 | 16 | 45 |
| | 90 | 106 | 4 | 5 | 94 | 111 | 205 |

(In 1919, 211 cases were treated.)

After-Treatment of " Tonsil and Adenoid " Cases.

After the operation the child attends from time to time at the School Clinic, where nasal douching is performed in cases requiring it. As soon as the School Medical Officer thinks it advisable the child returns to the Infirmary to be seen by the operating Surgeon, and if he is satisfied the case is marked off.

A leaflet on breathing exercises for the child is given to the mother and she is informed of the importance of seeing that the child breathes through the nose. In addition, a notice is sent to the School informing the Head Teacher of the fact that the operation has been performed and asked that the child should be corrected for mouth breathing.

D.—Treatment of Dental Defects (see page 54).

The policy adopted for dealing with dental defects amongst school children in Warrington is for the Dental Officer to begin each year inspecting and treating the 6 to 8-year-olds. As soon as this group is finished he passes on to the higher age-periods, 8 to 9, 9 to 10 years, and so on, for the remainder of the year.

In this connection I give the following figures of the children dealt with in 1920:—

| Age Periods. | No. Inspected. | | | | Total. |
|---------------------|----------------|-----|--------|-----|--------|
| | Boys. | | Girls. | | |
| 5—7 year olds ... | 1583 | ... | 1468 | ... | 3051 |
| 8—10 year olds ... | 2138 | ... | 2115 | ... | 4253 |
| 11—14 year olds ... | 2089 | ... | 2136 | ... | 4225 |
| Specials ... | 499 | ... | 522 | ... | 1021 |
| | 6309 | ... | 6241 | ... | 12,550 |

Roughly speaking, each week's inspection work is followed by two weeks' treatment to deal with the defects found.

In addition, all cases found by the Medical Officer at Routine Medical Inspection (see page 51) to require treatment are referred to the Dentist, and during 1920, 71 of these cases received attention. The Clinic established in 1912 was carried on as usual during the year.

Statistics showing the conditions found by the Dental Officer and the treatment undertaken at our Clinic, both for children attending the Public Elementary Schools and the Secondary School, will be found in the table on page 55.

The following is the Report on the work by the School Dentist (Mr. Hutchison):—

GENTLEMEN,

I beg to submit to you my Annual Report on Dental Inspection and Treatment for the year 1920.

All the children attending the Council Schools in the Borough were inspected by me during the past year.

All those who presented themselves at the Clinic received treatment.

During the period, 12,550 were inspected at the Schools and Clinic.

Of those children, 4,234 or 33.7% were found to have sound dentition, and 8,316 or 66.3% were found to have defective dentition.

The number of children on whose behalf parents desired treatment at the Clinic was 6,306 or 73.5%, and the number whose parents did not desire treatment at the Clinic was 2,407 or 26.5%.

Age Groups.

- 5—7. A large percentage of these children required careful attention, as it is the most critical age of transition between Temporary and Permanent teeth. The Permanent teeth are the most important, and it has been my plan to prepare the mouth for their eruption. This necessitated the extraction of many carious and septic Temporary teeth, and conservation of Permanent ones in their early stages of growth.
- 8—10. The special work involved with this age group was caused by septic conditions of the Oral Cavity and Pyorrhœa Alveolaris being due to the neglect of opportunity of seeking early advice and treatment; and in many cases to malnutrition and the prevalence of zymotic diseases in children of these years.
- 11—14. In this group there was a notable decrease in caries, and also evidence of more care in cleansing the mouth, and the fact that previous treatment had been sought.

SECONDARY SCHOOL.

15—16—17. I have examined the scholars attending the above school twice during the year. Collectively, they gave evidence of cleanliness and care. I found on re-examination that the treatment of those who were dealt with after the first inspection had been successful, only a small number requiring further treatment. I am pleased to be able to emphasise this point. The constant advice given to parents and children undoubtedly shows signs of bearing fruit in this age period. It is desirable that the teachers should constantly use their influence with the children in this direction, by giving Health Talks on Oral Hygiene.

With regard to the time occupied in the treatment of each case, this must vary of necessity.

In extractions, on an average 3 to 5 minutes is taken. Fillings require from 10 to 20 minutes, and more critical cases, when operations are necessary, at least 15 minutes.

A Nurse must be constantly in attendance to give me assistance by mixing fillings, sterilising instruments, and attending to children after operations, thus saving much of my time.

In conclusion, I have observed that children living in congested areas where ventilation is bad have, generally speaking, more dental caries than those who have better homes.

I am, Gentlemen,

Your obedient Servant,

W. HUTCHISON

(School Dental Officer).

E.—Treatment of Uncleanliness.

The methods adopted for supervising the cleanliness of the children have been given in previous Reports, and in 1919 particulars of the treatment of cases of pediculosis of the head were detailed.

As the result of “surprise visits,” which were carried out on a larger scale than ever before, the children have improved in every way.

For the purpose of these visits the town is divided into four areas, each containing seven schools, and one School Nurse is responsible for each area.

The following are particulars of the work done:—

| | | |
|--|--------|-----|
| Number of schools in the Borough | ... | 23 |
| Average number of visits per annum paid by Nurses to each school | ... | 5 |
| Total number of examinations made by School Nurses of children during 1920 | 23,099 | |
| Number of individual children found unclean | ... | 861 |
| Number found suffering from minor ailments | ... | 762 |

The homes of children excluded or referred to the Clinic for treatment after school hours for uncleanness of the body, dirty and defective clothing, and pediculosis of the head are visited by the School Nurses and the mother advised re treatment of the condition. Necessitous cases are referred to the Guild of Help or the Guardians.

Most conditions of uncleanness or defective clothing are remedied at their first or second attendance at the Clinic.

Pediculosis cases receive the printed instructions mentioned in the Report for 1919 and attend daily at the Clinic for advice. If this condition is not satisfactorily relieved within seven days the parents are warned that they may have to appear before the School Attendance Committee.

Legal Proceedings are taken when necessary under the School Attendance Byelaws.

If the child is not certified "fit" within 7 days the parents are summoned before the School Attendance Committee. This Committee warns and advises the parents and usually orders the case to be prosecuted for non-attendance at school if a further period of seven days elapses before the child is fit to be re-admitted into school.

In this connection during 1920 :—

| | |
|--|----|
| Number of cases of Ped. Cap. summoned before the Committee ... | 86 |
| Number of cases prosecuted | 7 |
| Number of convictions obtained | 7 |
| Result of prosecutions:— | |
| Fined 15/- | 1 |
| Fined 10/- | 3 |
| Fined 5/- | 3 |

F.—Treatment of all Other Defects.

The other defects found during the year requiring treatment and given in Table II. on page 50 were :—

| | |
|--|----|
| Malnutrition | 6 |
| Enlarged Cervical Glands (non-tubercular)... | 1 |
| Diseases of the Heart and Circulation ... | 12 |
| Bronchitis | 40 |
| Tuberculosis— | |
| Lungs | 3 |
| Glands | 2 |
| Chorea | 3 |
| Other Defects and Diseases | 9 |
| Total | 76 |

All of these cases were satisfactorily treated during the year (see Summary, Table IV.). This does not necessarily mean that all cases were cured, and some may still be under treatment.

In the first instance, all the above cases are advised to receive treatment from their own doctor.

If the parents cannot afford to do this we assist them in obtaining a recommendation for attendance at the local Infirmary, or, if necessary, from the Poor Law doctors.

In a few cases, where the parents were unable to bear the expense and the child had to be taken to special Institutions in Liverpool or Manchester, they were assisted by the Guild of Help.

All cases are ultimately re-examined by the School Medical Officer and only marked off the "follow-up" list when he is satisfied that no further beneficial results can result from treatment.

Malnutrition cases are kept in a special register and frequently re-examined, whilst all children suffering from or suspected to be suffering from **Tuberculosis** are referred to and kept under observation by the Medical Officer of Health.

During 1920 the following cases were examined at the Health Office, where a record was kept of their weight and the physical signs entered on a special chart:—

| | No. of Cases. | No. of Examinations. |
|------------------------------------|------------------|-------------------------|
| Tuberculosis of Lungs | 47 | 147 |
| Suspected Tuberculosis of Lungs... | 21 | 33 |
| Tuberculosis of Glands | 9 | 17 |
| ,, ,, Ankle | 2 | 2 |
| ,, ,, Spine | 4 | 5 |
| ,, ,, Hip | 3 | 14 |
| ,, ,, Peritoneum | 12 | 21 |
| ,, ,, Knee | 1 | 2 |
| ,, ,, Cheek (Abscess) | 1 | 2 |
| ,, ,, Hand | 1 | 5 |
| | — | — |
| | 101 | 248 |

The need for a special institution for treating and educating many of these cases is fully recognised and will have to be faced in the near future.

When accommodation is available at our sanatorium at Sankey selected cases are admitted for treatment. During 1920, 5 children of school age were treated at Sankey. It is

hoped to be able to do more of this work at our new sanatorium at Weaverham, which, it is hoped, will be opened during the coming year.

Ten deaths occurred among children of school age from tuberculosis during 1920 (lungs 2, peritoneum 3, brain 4, spine 1).

In Table IV. at the end of the Report a summary is given relating to the number of children who were treated during 1920 of those inspected at the Routine Inspections only.

The proportion (83.2%) who received treatment is high, and would be still higher, but obviously those who are only discovered to be defective towards the end of the year cannot always receive treatment before the beginning of the next twelve months. Especially is this so with children suffering from defective vision and enlarged tonsils and adenoids, which cases will be seen to make up a big proportion of the total.

9.—OPEN-AIR EDUCATION.

There can be no doubt as to the good results achieved from the education of tubercular and weakly children on strictly open-air principles, and if fresh air proves of such benefit to the ailing it must surely be of value to the healthy.

It is very desirable that more provision for open-air education should be made, and it is to be hoped that this will be taken into consideration in planning all the new schools.

There is at present for elementary school children in Warrington no open-air day or residential school, neither are there any open-air classrooms in connection with the ordinary schools.

So far as possible the teachers make use of the playgrounds and sheds as much as they can in the summer time in fine weather. In addition, there are the casual visits to the parks for Nature lessons.

10.—PHYSICAL TRAINING.

Reference was made to this subject in the Report for 1919. No Area Organiser has been appointed, and usually each teacher is responsible for his or her own class.

11.—PROVISION OF MEALS.

It has not been found necessary during recent years to exercise our powers under the Provision of Meals Acts, 1906-14.

The last time that meals were provided for school children was in the year 1914.

The School Medical Officer approved of the suitability of the dietary and the general arrangements made, and in many instances selected the children.

12.—SCHOOL BATHS.

Baths were installed in two of the schools in the town—at Bolton Council School in 1913, and at Evelyn Street Council School in 1914.

For a fuller description of them, reference must be made to the Reports of those years.

Full use was made during 1920 of the facilities afforded, and great benefit would accrue to the children in other areas if bathing accommodation could be provided.

To some extent the visits to the swimming baths during the summer months for instruction of the older boys and girls in swimming (see Physical Training, 1919 Report) is helpful in maintaining the standard of cleanliness of this age period, as it ensures a preliminary weekly bath for the sixteen weeks the course lasts.

13.—CO-OPERATION OF PARENTS.

A notice is sent to the parents or guardians of each child previous to the routine inspection in the schools, inviting them to be present at the examination. Advantage was taken of this in 858 or 22.5% of the cases.

For many years this proportion has remained about the same.

In all cases in which a defect is found, a letter is sent to the parents pointing it out, and, when necessary, intimating that medical advice must be obtained.

During 1920, 530 such letters were sent.

In the majority of cases the parents act at once on the advice offered and co-operate with us willingly in obtaining adequate attention for their children. One parent is almost invariably present when a child is re-examined at the Clinic for the purpose of noting whether treatment has been satisfactorily carried out.

In a growing number of instances children are being brought spontaneously by parents to the Clinic for advice from the School Medical Officer as to the necessity for or best form of treatment to be obtained, or as to the suitability of a proposed occupation when the child leaves school.

During 1920, a total of 4,533 cases of defects and minor ailments were satisfactorily treated, and it is noteworthy that only in 23 instances was it necessary to take the cases before the Committee in order to obtain the desired result.

Committee Cases and Prosecutions.

Only as a last resort are parents summoned to appear before the School Medical Service Sub-Committee. During 1920 this was found necessary for the following cases:—

| | | | | | |
|--|-----|-----|-----|-----|----|
| Defective Vision | ... | ... | ... | ... | 5 |
| Failure to complete payments for Spec- | | | | | |
| tacles | ... | ... | ... | ... | 12 |
| Enlarged Tonsils | ... | ... | ... | ... | 6 |
| | | | | | — |
| Total | ... | ... | ... | ... | 23 |
| | | | | | — |

In none of these cases was it found necessary to prosecute, as the parents consented to do what was required after interviewing the Committee.

The steps taken for dealing with cases of uncleanness are given on page .

14.—CO-OPERATION OF TEACHERS.

The success of the work of the School Medical Service is due in large measure to the help given by the Teachers who co-operate, almost without exception, both willingly and usefully at medical inspections and in the treatment and after-care of the children.

The following is a summary of some of the services rendered:—

- (1) On request they furnish to the Education Department a list of all the children in the school of the age period about to be examined.
- (2) They give to the children to take home to the parents the notices of the pending inspection.
- (3) They are frequently present during the actual medical inspection.

- (4) They bring forward at the time of the routine inspection all "special" children not due for examination that they suspect to be suffering from defects.
- (5) They are responsible for keeping the medical schedule cards for each child, and when the child leaves the school they return the card to the Education Department.
- (6) The results of treatment are notified to the teachers, who enter it on the schedule card.
- (7) A letter is sent in all cases of certain defects and they pay special attention to cases requiring it, *e.g.*, breathing exercises for all cases of tonsil and adenoids after operation supervision of heart cases and cripples at drill or playtime, "spectacles" register, position in the class of cases of defective vision, &c.
- (8) They furnish special reports on mentally defective children.
- (9) They are responsible for excluding any suspected case of infectious or contagious disease and do not re-admit the child until a medical certificate of freedom from infection is produced.

15.—CO-OPERATION OF SCHOOL ATTENDANCE OFFICERS.

Similarly, a large amount of useful work is performed each year by the School Attendance Officers.

During 1920 more than 4,000 visits were paid by them to the homes on our behalf in the following-up of children requiring treatment. They deliver all notices making appointments for parents to attend with their children at the Clinic for re-examination or treatment.

In addition, they refer to us children who are absent from school and suspected of suffering from contagious disease.

They report all cases of suspected infectious disease to the Health Department.

Weekly lists of children who do not attend regularly at the Clinic when required to do so are furnished by us to them for visiting.

They make a note of any possibly mentally or physically defective child they observe and report it to the Education Department so that arrangements can be made for examination by the doctor.

In fact, when ever in the course of their duties any assistance can be rendered to us in our work it is willingly given by the School Attendance Officers.

16.—CO-OPERATION OF VOLUNTARY BODIES.

The branches of voluntary organisations in the town, such as the Guild of Help, National Society for the Prevention of Cruelty to Children, National League of the Blind, work in close co-operation with the School Medical Department, and advantage is taken of their services in all cases in which their help is likely to be effective.

17.—BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.

Arrangements are made for a special examination by the School Medical Officer at the earliest possible date of any child suspected of being defective in any way.

There are as yet no special schools in the Borough, but all the blind or deaf children found suitable are admitted to institutions in neighbouring districts.

Our method of supervising the various defective children in the area has been described in detail in previous Reports. Registers are kept of all mentally and physically defective children in the town in attendance at school or unable to attend school as the case may be, and the children are re-examined several times during the year by the School Medical Officer.

A summary of the exceptional children in the area is given on page 27 of Report for 1919.

Mental Deficiency Act 1913.—No cases were reported to the Local Authority under the Act (in our case the Lancashire Asylums Board) during the year 1920, but six cases of non-educable children (2 idiots and 4 imbeciles) were reported early in the current year.

18.—NURSERY SCHOOLS.

There are no nursery schools in the area.

19.—SECONDARY SCHOOL.

All the children attending the Secondary School are medically examined once each year. In addition the School Doctor visits once each term to re-examine certain children and to see any special cases.

In 1919 the routine inspection was made at the beginning of the year. However, during 1920 it was found that the most convenient time for the inspection was the month of December,

and in future this arrangement will be continued, partly so that there should be less disturbance to the scholars who are working for examinations during the first half of the year and partly in order to enable the A.S.M.O. to finish his inspections in the Elementary Schools.

This arrangement, however, makes it impossible for treatment to be obtained and completed in the same year that the defects are found, and is, therefore, disadvantageous for statistical purposes. At the same time our experience shows that there is no difficulty in inducing the parents of children attending this school to obtain at once adequate treatment for any defect to which we draw their attention. The results of the treatment of defects found in December, 1920, will be given in my next Report.

AGE GROUPS OF CHILDREN INSPECTED.

| | Boys. | Girls. |
|------------------|-------|--------|
| Age 12 years ... | 6 | 3 |
| Age 13 years ... | 32 | 15 |
| Age 14 years ... | 32 | 32 |
| Age 15 years ... | 19 | 34 |
| Age 16 years ... | 5 | 12 |
| Age 17 years ... | 2 | 7 |
| Total ... | 96 | 103 |

The Board's schedule card was used in every instance.

As regards the nutrition of the 199 children, only 3.7% were below normal, 88.1% were normal, and 8.2% were above normal.

The only defects found were:—

| | For Treatment. | For Observation. |
|----------------------|----------------|------------------|
| Boys— | | |
| Defective Vision ... | 11 | — |
| Enlarged Tonsils ... | 2 | — |
| Girls— | | |
| Defective Vision ... | 4 | 3 |
| | 17 | 3 |

The results of dental inspection and treatment are given on page .

20.—CONTINUATION SCHOOLS.

When established it is proposed to extend our present system of medical and dental inspection and treatment to the Continuation Schools,

21.—EMPLOYMENT OF CHILDREN AND YOUNG PERSONS.

(i.) There are still a great many children in this town employed either whole-time or part-time out of school hours, although not so many as there were during the period of the War.

In the near future greater restrictions re child labour will come into force.

Various Acts and Regulations have from time to time dealt with this question, and the Education Act of 1918 amended certain of these, and, in addition, gave considerable powers to Local Education Authorities in controlling employment.

Street Trading was formerly regulated by Byelaws made under the Employment of Children Act, 1903, and administered by the Police, but the Education Act, 1918, transfers these duties to the Education Authority. New Byelaws have been made and submitted to the Home Office for approval.

Similarly Byelaws under the New Act permitting the employment of children over 12 years of age in certain occupations for certain hours were passed by the Education Authority in 1920, and also await approval (draft copy published in Report for 1919).

Sections 68 to 72 of the Factory and Workshops Act of 1901 which permitted the employment of children of 13 years of age who had obtained a certificate of having reached a satisfactory educational standard was repealed by the Education Act of 1918, and certain Sections of the Prevention of Cruelty to Children Act, 1904, dealing with the employment of children for the purpose of singing, playing or performing have been amended.

In addition, the Employment of Women, Young Persons and Children Act, 1920, coming into force in 1921, makes it illegal for any child (*i.e.*, a person under 14 years of age) to be employed in any industrial occupation.

Further, the Shops Acts, 1912 and 1920, administered by the Local Health Authority restrict the hours of employment of young persons in shops.

Briefly, the main provisions in the Acts and Byelaws (when in operation) as regards the ages of children employed will be :—

- (1) No child under 12 years of age can be employed.
- (2) No child under 14 years of age can be exempted from attendance at school.

- (3) Children between 12 and 14 years of age can only be employed out of school hours at certain occupations (*e.g.*, errand boy) during certain hours not more than 14 a week.
- (4) No child under 14 years of age can be employed in any industrial undertaking.
- (5) No boy under 15 or girl under 16 years of age can be employed or engaged in street trading.

An important clause in the Education Act, 1918, gives the Education Authority power to prohibit a child from engaging in any employment which is prejudicial to its health, if satisfied that such is the case on a report from the School Medical Officer or otherwise. During 1920 advantage was taken of this in several instances with beneficial results to the child.

(ii.) There is co-ordination of the work of the School Medical Service with that of the Juvenile Employment Committee.

Cards are supplied to all the schools in the town by the Juvenile Employment Bureau.

Particulars of all children who are about to attain the age of 14 years and of all who are about to apply for exemption are filled in by the Head Teacher, with a brief epitome of the Medical Inspection Record in each instance. These cards are then forwarded direct to the Juvenile Employment Committee, of which body, out of 21 members, 6 are representatives of the Local Education Authority.

Unfortunately, the school medical records are apparently only very rarely made use of by the Certifying Factory Surgeon.

The School Attendance Committee have not in the past granted exemption to a child under 14 years of age until any defect from which the child was suffering had been satisfactorily treated

(iii.) There is no doubt that in many instances employment of the child out of school hours has had a deleterious effect on the child's health and has been one of the potent causes of malnutrition.

As soon as the Byelaws are finally approved they will be advertised and notice will be given that in the event of employment being required for a child between the ages of 12 and 14 years, application will have to be made to the Local Education Authority by the parents or guardians and also by the employer on special forms to be supplied for the purpose. As soon as these forms are completed and returned, arrangements will be made for the School Medical Officer to examine the child and to report on the suitability or otherwise of the work proposed. In the event of the employment being sanctioned, notice will

be sent to the school and the teacher notified of the name, age, address, form of employment and hours of work. This information will be kept in a register in each school—either the “specials” book or the “physically defective attending school” register, and the School Medical Officer will be asked to re-examine the child on the occasion of each routine inspection in the school. This will in some cases be twice a year, and at any rate it will be at least once a year in every school. Each child will, of course, be examined at the routine inspection for leavers about the age of 13 years.

In addition, the teacher will be asked to watch the child and to report at once any ailments, apparent listlessness or any other symptom suspected to be due to the employment. Any case in which the occupation appears to be detrimental to the child would be reported to the Committee, and, if, necessary, such employment would be prohibited under Section 15 of the Education Act, 1918.

The supervision of the children engaged in employment out of school has been carried on for some time on lines similar to the above, but the work will be more comprehensive once the Byelaws are in force.

22.—SPECIAL INQUIRIES.

An Inquiry into the Incidence and Causation of Crippling of Children in Warrington.

INTRODUCTION.

Although for many years we have specially supervised the various physically defective children of school age in this town, both those able and those unable to attend school, no figures were available to show the actual incidence amongst children of those defects which may handicap them so severely in after-life.

The following census has been compiled, therefore, in order to elicit more exact information on the subject.

In general in this country too little consideration has apparently been given to this class of the community.

In many instances, if the condition which eventually leads to crippling was recognised and treated efficiently at an early stage a cure might result with little or no permanent disability.

Again, although the children affected are as a rule quick and active mentally, the disability at any rate in the acute stage often prevents that regular attendance at school necessary for them to receive an education which will help to compensate in some measure in after-life for their physical disabilities. In this respect special and fuller facilities for education are required throughout the country.

I.—FORMS OF CRIPPLING INVESTIGATED : DEFINITIONS.

It was decided at the outset that the inquiry should be limited to cases of crippling coming under the following headings:—

- (1) **Tuberculosis**—including tuberculosis of the bones and joints only, and no other form of tuberculosis.
- (2) **Poliomyelitis, etc.**—including every case of poliomyelitis however slight, and any other form of paralysis in children,
- (3) **Rickets,**

(4) **Congenital deformities**, injuries and other causes.

(5) **Severe heart disease**, *i.e.*, severe enough to render the child unfit to attend school and to be suitable for a special school, or, if under school age, so severe as to prevent the child joining in games, etc., with other children without showing some effects of the lesion.

It was stipulated that in every case the defect to be included must be one that was obvious to the Nurse or Inspector conducting the preliminary inquiries.

II.—METHOD OF INQUIRY.

A special card was drawn up on which various information as to age at onset, treatment received, etc., was entered in every case, and a short memorandum of instructions given to each member of the staff engaged in the work in order to obtain as much uniformity as possible. The inquiries in the homes were conducted by the Health Visitors, School Nurses, and Tuberculosis Visitors.

As far as possible, a house-to-house census was made by the Health Visitors in the case of children from birth to 5 years. Advantage was taken, too, of any records we already possessed, such as lists of physically defective school children, lists of cripples known to the Cripples' Guild, notified cases of disease such as Tuberculosis or Poliomyelitis.

Every effort was made to obtain information about all the children in the town up to the age of 14 years who came under the headings before-mentioned, so that in this respect the inquiry was fairly exact. As soon as all the cards were completed they were checked. In some cases it was found that the cause and amount of crippling was indefinitely stated or unknown, so arrangements were made for Dr. Paulusz, Assistant School Medical Officer, and Dr. Helen Hogg, Assistant Medical Officer for Child Welfare Work, to examine the children and verify or complete the diagnosis. In some instances this involved visiting the children at home, though in the greater number of cases the parents brought them to the Health Department.

I am indebted to Inspector Snailham for summarising the particulars.

III.—SUMMARY OF INCIDENCE OF CRIPPLING.

| | |
|--|----------------------|
| Estimated population of Warrington | 74952 |
| Total number of cripples aged up to 14 years | 128 |
| Rate per 1,000 of population | 1.7 per 1,000 |
| Number of children aged 0 to 5 years | 7266 |
| Number of cripples among these | 31 or 4.2 per 1,000 |
| Number of children 5 to 14 years, <i>i.e.</i> , school age | 14100 |
| Number of cripples among them | 97 or 6.8 per 1,000 |
| Total children under 14 years of age in Warrington ... | 21366 |
| Number of cripples among them | 128 or 5.9 per 1,000 |

The incidence of the various forms **among males** is seen to be in order of frequency:—

| | | | | |
|----------------------------|-----|-----|-----|-------|
| Due to Infantile Paralysis | ... | ... | ... | 30.4% |
| „ „ Tuberculosis | ... | ... | ... | 24.6% |
| „ „ Rickets | ... | ... | ... | 18.8% |
| „ „ Congenital Deformities | ... | ... | ... | 13.0% |
| „ „ Severe Heart Diseases | ... | ... | ... | 7.2% |
| „ „ Accidents | ... | ... | ... | 5.7% |

and **among females**:—

| | | | | |
|----------------------------|-----|-----|-----|-------|
| Due to Rickets | ... | ... | ... | 33.8% |
| „ „ Infantile Paralysis | ... | ... | ... | 32.2% |
| „ „ Tuberculosis | ... | ... | ... | 10.1% |
| „ „ Congenital Deformities | ... | ... | ... | 8.4% |
| „ „ Severe Heart Diseases | ... | ... | ... | 8.4% |
| „ „ Accidents | ... | ... | ... | 6.7% |

IV.—AGE AND SEX INCIDENCE AND FORMS OF CRIPPLING.

The Census was taken during December, 1920, and at that time the ages and sex of those under 14 years of age, who came under the scope of the inquiry, are shown in the following tables:—

| MALES. | Years of age. | | | | | | | | | | | | | | |
|-----------------------------|---------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-------|-------|-------|-------|
| | Total cases. | Under one. | 1—2 | 2—3 | 3—4 | 4—5 | 5—6 | 6—7 | 7—8 | 8—9 | 9—10 | 10—11 | 11—12 | 12—13 | 13—14 |
| Forms of Crippling. | | | | | | | | | | | | | | | |
| Tuberculosis | 17 | — | — | — | 1 | — | 2 | 4 | 2 | 2 | — | 1 | 2 | 1 | 2 |
| Infantile paralysis | 21 | — | 1 | 1 | — | 1 | 3 | 2 | — | 2 | — | 3 | 1 | 4 | 1 |
| Rickets | 13 | — | — | — | 2 | 3 | 5 | 1 | — | 1 | — | 1 | — | — | — |
| Congenital deformities ... | 9 | 1 | 1 | — | 2 | 1 | — | 2 | — | — | — | — | — | 2 | — |
| Severe heart diseases | 5 | — | — | — | — | — | — | 1 | — | — | 2 | 1 | 1 | — | 2 |
| Injuries due to accidents. | 4 | — | — | — | — | — | — | — | — | — | — | — | — | 2 | — |
| Total | 69 | 1 | 2 | 1 | 5 | 5 | 10 | 10 | 2 | 5 | 4 | 6 | 4 | 9 | 5 |
| FEMALES. | | | | | | | | | | | | | | | |
| Tuberculosis | 6 | — | — | — | 2 | — | — | 2 | — | — | 1 | 1 | — | — | — |
| Infantile paralysis | 19 | — | — | 1 | — | 1 | — | 1 | 3 | — | 3 | 4 | 3 | 2 | 1 |
| Rickets | 20 | — | — | 1 | 3 | 4 | 4 | 4 | 1 | — | 1 | — | 1 | — | 1 |
| Congenital deformities ... | 5 | 2 | 1 | — | 1 | — | — | 1 | — | — | — | — | — | — | — |
| Severe heart diseases | 5 | — | — | — | — | — | — | 1 | — | 1 | — | — | — | 1 | — |
| Injuries due to accidents. | 4 | — | — | 1 | — | — | 1 | — | — | — | — | — | — | 2 | — |
| Total | 59 | 2 | 1 | 3 | 6 | 5 | 5 | 9 | 4 | 1 | 6 | 5 | 4 | 5 | 3 |

As regards the incidence among male and female children as a whole, figures are only available for the school population. The number of children of school age in the borough on December 1st, 1920, was approximately 14,100 and of these 7,038 were boys and 7,062 were girls.

The incidence of the various forms of crippling among the sexes is shown in the next two tables.

| MALES. | | School age (number of males 7038). | | | | | | | | | | Rate per 1,000 living male school children. |
|---------------------------------|--|------------------------------------|-----|-----|-----|------|-------|-------|-------|-------|--------|---|
| Forms of Crippling. | | 5-6 | 6-7 | 7-8 | 8-9 | 9-10 | 10-11 | 11-12 | 12-13 | 13-14 | Total. | |
| Tuberculosis | | 2 | 4 | 2 | 2 | — | 1 | 2 | 1 | 2 | 16 | 2.27 |
| Infantile Paralysis | | 3 | 2 | — | 2 | 2 | 3 | 1 | 4 | 1 | 18 | 2.53 |
| Rickets | | 5 | 1 | — | 1 | — | 1 | — | — | — | 8 | 1.12 |
| Congenital Deformities | | — | 2 | — | — | — | — | — | 2 | — | 4 | 0.56 |
| Severe Heart Diseases | | — | 1 | — | — | 2 | 1 | 1 | — | — | 5 | 0.71 |
| Injuries due to accidents | | — | — | — | — | — | — | — | 2 | 2 | 4 | 0.56 |
| Total | | 10 | 10 | 2 | 5 | 4 | 6 | 4 | 9 | 5 | 55 | 7.81 |

| FEMALES. | | School age (number of females 7062). | | | | | | | | | | Rate per 1,000 living female school children. |
|---------------------------------|--|--------------------------------------|-----|-----|-----|------|-------|-------|-------|-------|--------|---|
| Forms of Crippling. | | 5-6 | 6-7 | 7-8 | 8-9 | 9-10 | 10-11 | 11-12 | 12-13 | 13-14 | Total. | |
| Tuberculosis | | — | 2 | — | — | 1 | 1 | — | — | — | 4 | 0.56 |
| Infantile Paralysis | | — | 1 | 3 | — | 3 | 4 | 3 | 2 | 1 | 17 | 2.40 |
| Rickets | | 4 | 4 | 1 | — | 1 | — | 1 | — | 1 | 12 | 1.69 |
| Congenital Deformities | | — | 1 | — | — | — | — | — | — | — | 1 | 0.14 |
| Severe Heart Diseases | | — | 1 | — | 1 | 1 | — | — | 1 | 1 | 5 | 0.70 |
| Injuries due to accidents | | 1 | — | — | — | — | — | — | 2 | — | 3 | 0.42 |
| Total | | 5 | 9 | 4 | 1 | 6 | 5 | 4 | 5 | 3 | 42 | 5.94 |

V.—PART OF BODY AFFECTED.

The following table mentions in each instance the part of the body that was mainly affected:—

| Class of defect. | Lower limbs. | Upper limbs. | Spine. | Heart | Paralysis one side of body. | Total. |
|-----------------------------|--------------|--------------|-------------|------------|-----------------------------|--------|
| Tuberculosis | 7 | 5‡ | 11 | — | — | 23 |
| Infantile paralysis | 32* | 3 | — | — | 5 | 40 |
| Rickets | 29† | — | 4 | — | — | 33 |
| Congenital deformities ... | 12 | 2 | — | — | — | 14 |
| Severe heart diseases | — | — | — | 10 | — | 10 |
| Injuries due to accidents. | 5 | 2 | 1 | — | — | 8 |
| Totals | 85 66.4% | 12 9.3% | 16 12.2% | 10 7.8% | 5 3.8% | 128 |

* 6 of these the upper limbs also affected.
† 3 of these the upper limbs also affected, and 6 are also dwarfed.
‡ 2 of these the lower limbs also affected.

VI.—POLIOMYELITIS.

It is noteworthy that since notification of Poliomyelitis (which causes Infantile Paralysis) became compulsory in 1912, there have only been 5 notifications of the disease, as follows:—

| | | | | |
|------------------|---------|---------|----------|------------------|
| | 1912. | 1916. | 1919. | 1920. |
| No. notified ... | 1 | 1 | 1 | 2 |
| Age | 2 years | 3 years | 22 years | 1 7/12 & 2 years |
| Sex | Male | Male | Male | 2 Males |

In comparison with the number of children aged 5 years to 14 years in Table page , there is here a decided diminution in the number of cases of this disease, and it is apparently a real decrease and not one due to lack of non-notification, as no cases were discovered by us in our inquiry among the younger children. Further, both in this inquiry and in one instituted among school children only some years ago the history elicited showed that the average age at onset is 1 year.

VII.—EXTENT OF CRIPPLING.

The next table shows in the various classes of defect to what extent the crippling was likely to handicap the child in earning a living in after-life:—

| Class of defect. | Amount of Crippling. | | Crippling will handicap. | | Nil. |
|-----------------------------|----------------------|-----------|--------------------------|------------|----------|
| | Slight. | Marked. | Wholly. | Partially. | |
| Tuberculosis | 11—47.8% | 12—52.1% | 3—13.0% | 18—78.2% | 2—8.7% |
| Infantile paralysis | 8—20.0% | 32—80 0% | 3—7.5% | 32—80.0% | 5—12.5% |
| Rickets | 13—39.3% | 20—60.6% | 3—9.0% | 22—66.6% | 8—24.2% |
| Congenital deformities ... | 6—42.8% | 8—57.1% | — | 10—71.4% | 4—28.5% |
| Severe heart diseases | — | 10—100.0% | 2—20.0% | 8—80.0% | — |
| Injuries due to accidents. | 3—37.5% | 5—62.5% | 1—12.5% | 7—87.5% | — |
| Totals | 41—32.0% | 87—67.9% | 12—9.3% | 97—75.7% | 19—14.8% |

VIII.—AVERAGE AGE AT ONSET.

The average age at which the disability which eventually led to crippling was first noticed was $3\frac{1}{4}$ years and varied as follows for the different classes:—

| | Male. | Female. | Average for both males and females. |
|----------------------------|---------------------|---------------------|-------------------------------------|
| Tuberculosis | 4 | 4 | 4 yrs. |
| Infantile paralysis | 1 2-12 yrs. | 11-12 yrs. | 1 yr. |
| Rickets | $1\frac{1}{2}$ yrs. | $2\frac{1}{4}$ yrs. | 1 10-12 yrs. |
| Congenital deformities ... | at birth. | at birth. | at birth. |
| Severe heart disease | 4 yrs. | 4 yrs. | 4 yrs. |
| Injuries due to accidents. | 7 yrs. | 4 yrs. | $5\frac{1}{2}$ yrs. |
| Average for all cases..... | 3 7-12 yrs. | 3 1-12 yrs. | $3\frac{1}{4}$ yrs. |

IX.—CONDITIONS ASSOCIATED WITH THE VARIOUS FORMS OF CRIPPLING.

It has been very difficult to elicit any definite information in this respect, but in 43 out of 128 cases (*i.e.*, 33.5%) there was a probability that there was some connection between the disability and certain home conditions:—

| Class of defect. | Poverty. | Ignorance and carelessness. | Mother working. | Over-crowding. | Lack of cleanliness. | Tuberculosis in family. |
|---------------------------------|------------|-----------------------------|-----------------|----------------|----------------------|-------------------------|
| Tuberculosis | 2 | 3 | — | 1 | — | 7 |
| Infantile Paralysis | 3 | 2 | 2 | — | — | — |
| Rickets | 4 | 10 | — | 1 | 2 | 1 |
| Congenital Deformities | — | 1 | — | 1 | — | — |
| Heart Disease | 3 | — | — | — | — | — |
| Injuries due to accidents | — | — | — | — | — | — |
| Total | 12 9.2% | 16 12.5% | 2 1.5% | 3 2.3% | 2 1.5% | 8 6.2% |

X.—AGENCIES FOR CARING FOR CRIPPLED CHILDREN IN THE AREA AND THE SCOPE OF THEIR WORK.

(a) Public.

The Health Authority and Education Authority by supervision in the homes and in the schools are able to render assistance in various ways.

The Poor Law Authority also assists certain necessitous cases.

(b) Voluntary.

The Guild of Help every year aid many cases brought to their notice by providing apparatus and in paying travelling and other expenses for those seeking medical advice and treatment outside the town.

The Cripples' Guild, of which the Headquarters are in Bold Street Wesleyan Sunday School, has been in existence since 1911.

At present there are 137 cripples on the books, the majority of these being over 14 years of age.

The principal objects of the Guild are:—

- (1) **Visiting the homes of the cripples.**—There are fourteen voluntary workers who pay occasional visits with the object of keeping in touch and assisting in any way possible.
- (2) **Provision of appliances.**—Spinal carriages are provided in certain cases.
- (3) **Amusements and Annual Picnic.**—Occasional concerts and tea-parties are held and every year a motor drive and picnic in the country are arranged.
- (4) **Educational.**—Classes in reading, writing, modelling and basket-making were held before the War. These classes have as yet not been resumed, but it is hoped to re-start them during the coming winter.

Table showing the number of Cripples who have received benefit from Voluntary Agencies:—

| Class of Defect. | Guild of Help. | Cripples' Guild. | Total Cases. |
|---------------------------------|----------------|------------------|--------------|
| Tuberculosis | 5. 21.7%. | 1. 4.3%. | 23 |
| Infantile Paralysis | 6. 15.0%. | 1. 2.5%. | 40 |
| Rickets | 6. 18.1%. | 2. 6.0%. | 33 |
| Congenital Deformities | 3. 21.4%. | — | 14 |
| Severe Heart Disease | 1. 10.0%. | — | 10 |
| Injuries due to accidents | 1. 12.5%. | — | 8 |
| Totals | 22. 17.1%. | 4. 3.1%. | 128 |

XI.—TREATMENT.

1.—Means available in the Area.

The Institutions available for the treatment of cripples are the Warrington Infirmary and Dispensary and the Union Infirmary. It will be noticed from the table on page that 45 out of the 80 cases that received institutional treatment were treated at these hospitals. The remainder (35 cases), together with 18 of the cases also treated locally, received treatment in other institutions, *e.g.*, Liverpool, Manchester, Wigan, and Rotherham.

2.—Forms of Treatment Received.

| Forms of Treatment. | Tuberculosis. | Infantile Paralysis. | Rickets. | Congenital Deformities. | Heart Diseases. | Injuries. | Totals. |
|-----------------------------------|---------------|----------------------|----------|-------------------------|-----------------|-----------|---------|
| No. treated in Institutions | 20 | 28 | 18 | 6 | — | 8 | 80 |
| In class | 86.9% | 70.0% | 54.5% | 42.8% | — | 100.0% | 62.5% |
| Medical | 1 | 7 | 16 | 1 | 10 | 1 | 36 |
| Operative | 4 | 8 | 4 | 2 | — | 4 | 22* |
| Massage | 1 | 9 | 4 | 2 | — | — | 16 |
| Manipulation | — | — | 1 | — | — | — | 1 |
| Remedial | — | — | — | 1 | — | — | 1* |
| Exercises | — | — | — | — | — | — | — |
| Apparatus | 17 | 12 | 8 | 5 | — | 3 | 45 |
| Electricity | — | 2 | — | — | — | — | 2* |
| No treatment | — | 2 | — | 3 | — | — | 5 |
| Totals | 23 | 40 | 33 | 14 | 10 | 8 | 128 |

* 21 of these also had either massage or apparatus.

3.—Institutions in which Cripples have received Treatment.

CLASS OF DEFECT.

| Name of Institution. | Tuber- culosis | Infan- tile Para- lysis | Rick- ets. | Conge- nital Deformities | Heart Disease | Injur- ies. | Total |
|--|-------------------|----------------------------------|---------------|--------------------------------|------------------|----------------|-------|
| Warrington Infirmary | 12 | 12 | 10 | 2 | — | 5 | 41* |
| Union Infirmary, Warrington | 2 | — | 1 | — | — | 1 | 4* |
| Aikin Street Hospital, Warrington | — | — | 1 | — | — | — | 1 |
| Royal Southern, Liverpool | 3 | 6 | 4 | 3 | — | 1 | 17 |
| Northern Infirmary, Liverpool | — | 1 | — | — | — | — | 1 |
| Myrtle St. Hospital, Liverpool | 3 | 3 | 1† | 1 | — | — | 8 |
| Nursing Home, Liverpool | — | 2 | 1 | — | — | — | 3 |
| Royal Infirmary, Manchester | — | 1 | — | — | — | — | 1 |
| Children's Hospital, Manchester | — | 2 | — | — | — | — | 2 |
| Wigan Infirmary | — | 1 | — | — | — | — | 1 |
| Rotherham Infirmary | — | — | — | — | — | 1 | 1 |
| Totals | 20 | 28 | 18 | 6 | — | 8 | 80 |

* 18 of these also received treatment in other hospitals, *i.e.*, 10 Royal Southern Hospital, Liverpool; 6 Myrtle Street Hospital, Liverpool; 1 Northern Hospital, Liverpool; 1 at Manchester Infirmary.

† This case is now receiving treatment at Leasowe.

4.—Extent to which Medical Advice and Treatment was obtained at onset of disability and continued.

The following table shows percentage of cases in each class in which medical advice was, or was not, sought at once so far as we have been able to elicit it:—

| Class of defect. | Cases where medical advice was sought at once. | Medical advice <i>not</i> sought at once. | Total cases. |
|----------------------------|--|---|--------------|
| Tuberculosis | 22—95.6% | 1—4.3% | 23 |
| Infantile paralysis | 37—92.5% | 3—7.5% | 40 |
| Rickets | 16—48.4% | 17—51.5% | 33 |
| Congenital deformities ... | 10—71.4% | 4—28.5% | 14 |
| Severe heart disease | 10—100% | — | 10 |
| Injuries due to accidents. | 8—100% | — | 8 |
| Totals | 103—80.4% | 25—19.5% | 128 |

and the next table shows the extent to which treatment has been continued:—

| Class of defect. | No. of cases where medical treatment has been continuous. | Not continuous. | Total cases. |
|-----------------------------|---|-----------------|--------------|
| Tuberculosis | 19—82.6% | 4—17.3% | 23 |
| Infantile paralysis | 32—80.0% | 8—20.0% | 40 |
| Rickets | 16—48.4% | 17—51.5% | 33 |
| Congenital deformities ... | 10—71.4% | 4—28.5% | 14 |
| Severe heart diseases | 10—100.0% | — | 10 |
| Injuries | 6—75.0% | 2—25.0% | 8 |
| Totals | 93—72.6% | 35—27.7% | 128 |

5.—The Results of Treatment are shown in the following table:—

| Class of defect. | Improving. | Stationary. | Retrogressing. |
|----------------------------|------------|-------------|----------------|
| Tuberculosis | 13—56.5% | 6—26.0% | 4—17.3% |
| Infantile paralysis | 16—40.0% | 20—50.0% | 4—10.0% |
| Rickets | 18—54.5% | 11—33.3% | 4—12.1% |
| Congenital deformities ... | 7—50.0% | 6—42.8% | 1—7.1% |
| Heart diseases | 4—40.0% | 4—40.0% | 2—20.0% |
| Injuries due to accidents. | 3—37.5% | 4—50.0% | 1 12.5% |
| Totals | 61—47.6% | 51—39.8% | 16—12.5% |

XII.—EDUCATIONAL PROVISION.

Arrangements have been made for special supervision in the schools and in the homes of all physically defective children and these cases are examined periodically by the School Medical Officer.

We have as yet no Orthopædic Centres, Remedial Exercise Classes, nor Special Schools, either day or residential.

Only about 42% of the crippled children in the town have been able to attend the ordinary elementary schools regularly, as is shown in the next table:—

| Class of defect. | Regular. | Irregular. | Not fit to attend. | Totals. |
|-----------------------------|----------|------------|--------------------|---------|
| Tuberculosis | 6—30.0% | 5—25.0% | 9—45.0% | 20 |
| Infantile paralysis | 21—60.0% | 8—22.8% | 6—17.1% | 35 |
| Rickets | 9—45.0% | 4—20.0% | 7—35.0% | 20 |
| Congenital deformities ... | 3—60.0% | 1—20.0% | 1—20.0% | 5 |
| Severe heart diseases | — | 5—50.0% | 5—50.0% | 10 |
| Injuries due to accidents. | 2—28.5% | 3—42.8% | 2—28.5% | 7 |
| Totals | 41—42.2% | 26—26.9% | 30—30.9% | 97 |

XIII.—EMPLOYMENT.

The question of employment and the selection of suitable occupations presents many difficulties. A striking fact in this inquiry was the amount of apparent indifference on the part of parents as to the future employment of the cripple.

From the following table it is seen that only in 20 cases out of 128 (or 15.6%) had the parents given any attention to the matter:—

Cases in which future employment of child had been considered.

| | Bootmaking. | Household. | Farm work. | Clerical work. | Motor driving. | Tailoring or Dressmaking. | Basket making. | Employment not considered. |
|--------------------------------|-------------|------------|------------|----------------|----------------|---------------------------|----------------|----------------------------|
| Tuberculosis..... | 1 | — | 1 | — | — | 1 | — | 20 |
| Infantile Paralysis.... | 3 | 1 | 1 | — | 1 | 3 | — | 31 |
| Rickets | — | — | — | — | — | 2 | 1 | 30 |
| Congenital Deformities | — | — | 1 | — | — | — | — | 13 |
| Severe Heart Disease | — | — | — | — | — | 1 | — | 9 |
| Injuries due to Accidents..... | 1 | — | — | 1 | — | 1 | — | 5 |
| Totals..... | 5 | 1 | 3 | 1 | 1 | 8 | 1 | 108 84% |

From the table on page it is seen that at least 80% of the cripples would probably be handicapped later on, and even making allowance for the fact that some are still very young, one would have expected that the question of future employment would have been considered in more than 15.6% of the cases.

In a few instances parents have sought the advice of the School Medical Officer in this matter.

If suitable training could be given to the children there are many occupations in Warrington at which they might be employed.

Occupations in Warrington suitable for Cripples.

A.—Boys' occupations. Number of workshops in Warrington.

| | |
|--|----------------------|
| Boot and Shoe Repairing | 44 |
| Clogging | 6 |
| Tailoring | 15 |
| Saddlery and Harness Making ... | 3 |
| Hamper Making | 3 |
| Basket Making | 1 (Blind proprietor) |
| Brush Making | 3 |
| Watch Repairing | 3 |
| Photography | 3 |
| Bookbinding | 2 |
| Metal Engraving | 1 |
| Metal Pressing and Light Woodwork | 1 |
| Clerical Work | |
| do. Cash desks in shops and places of amusement. | |

One-armed boys.

Messengers, Agents, Travellers,
Weighing Machine Attendants. Almost all the large works have weighing machines and there is also one public one.

Other occupations which may be suitable:—

Tin Smiths, Picture Framing, Leather Belt Making, Dental Mechanics,
Musicians, Gardening, Poultry Farming, Artificial Flower Making.

B.—Girls' occupations. Number of workshops and factories in Warrington.

| | |
|---|------------------------------------|
| Dressmaking | 21 |
| Millinery | 23 |
| Tailoring | 15 (included in boys' occupations) |
| Embroidery | 1 |
| Knitting (Stockings) | 1 |
| Machining at Power Machines ... | 2 (Large factories) |
| Bookbinding | 2 |
| Fire-lighter Making | 2 |
| Cardboard Box Making | 2 (Large factories) |
| Cardboard Box Covering | 1 |
| Paper Bag Making | 1 (Large factory) |
| Plain Sewing | |
| Domestic Service | |
| Clerical Work (Cash Desks), Shops, and Places of Amusement. | |

One-armed girls.

Office Girls, Canvassers, Embroidery, Simple Machine Feeding.

Other occupations which may be suitable:—

Artificial Flower Making, Ladies' Hairdressing, Bath Attendants,
Musicians, Gardening, Poultry Farming.

XIV.—FACILITIES FOR EARLY DETECTION AND CONTINUOUS SUPERVISION OF CASES.

Our facilities for early detection and for supervision of the cases in the area are fairly satisfactory.

Notification of such diseases as Tuberculosis and Poliomyelitis are of great assistance.

Our Consultation Centres in the town are open on three afternoons a week, and more Centres will soon be opened.

There are on the registers more than 700 children,

At present between 200 and 300 children below school age attend each week and are kept under medical supervision.

From 5 years of age to 14 years of age the School Medical Service has continuous opportunities of watching the children.

In addition, a staff of 4 School Nurses, 5 Health Visitors, and 2 Tuberculosis Visitors are daily visiting in the homes.

It will be noticed in the table on page 44 that medical advice was sought at once in 103 out of 128 cases or 80.4%, and in a large measure this was due to the supervision of the nursing staff.

A special register of cripples is kept and particulars of each case filed on a special card.

One feels that more use could be made of this work and of our records both by parents and employers at the time the child leaves school to enter industrial life.

XV.—STEPS NECESSARY TO SECURE PROPER CARE AND TREATMENT FOR CRIPPLED CHILDREN.

Treatment.

Hospitals.—Institutional accommodation for cases of surgical tuberculosis in children is urgently required and at present the Local Authority are negotiating with the Managers of Leasowe Hospital for the use of certain beds for these cases. Further, at our new Sanatorium at Weaverham it is hoped to be able to deal with a few of these cases who do not require any active treatment.

Orthopædic Centre.—The inauguration of a special centre in the town with electrical and other appliances installed, at which defective children can receive early and continuous treatment, is also necessary.

Remedial Exercise Classes.—Special classes run in connection with various schools are desirable at which exercises for remedying deformities, etc., can be carried out under an expert and where massage can be given if needed.

Education.

Special facilities must be afforded cripples for obtaining an education, both under suitable conditions and also of such a character as to be of most service to them in after-life.

At present the Local Authority are considering the question of the provision of a Special School for Physically Defectives. Such a school, situated on the outskirts of the town, ought to be partly a residential and partly a day school and be on open-air lines. Further, it is desirable that all our schools should more and more approximate to the open-air type, and at any rate have at least one open-air class-room.

Employment.

Special opportunity must be afforded for training in various trades and occupations, such as those mentioned in the lists on page 46.

In every instance the School Medical Officer should be consulted by parents as to the suitability of the employment proposed on the child leaving school, and in many cases a report from the Head Teacher may be of the greatest value as indicating not only the capabilities but also the natural bent of the child. Much closer co-operation is necessary between the Education Authority and industry in general, and one looks forward to the time when a Sub-Committee of the School Medical Service Committee will be a Juvenile Employment Advisory Committee and the School Medical Officer's Records made use of by the Certifying Factory Surgeon.

After-Care.

Although our facilities for supervising the younger generation up to 14 years of age are good, it is not so easy to continue this in all cases in after-life. It is here that the services of such bodies as the Guild of Help and Cripples' Guild are invaluable. In future more efficient after-care work

will have to be carried out if much of the earlier work is not to be wasted, and this holds good generally for physically and mentally defectives and for those suffering from tuberculosis and other chronic diseases.

G. W. N. JOSEPH,

Medical Officer of Health.

23.—MISCELLANEOUS.

In addition to the routine work of inspections in the schools, the A.S.M.O. has paid 26 special visits in connection with the following:—

| | |
|--|-------|
| Re-examinations of defective children ... | 4 |
| Suspected outbreaks of infectious or contagious disease | 8 |
| “ Re Spectacles Registers ” | 12 |
| Re complaints from Head Teachers. ... | 2 |
| | <hr/> |
| | 26 |
| | <hr/> |

Examination of Bursars, Student and Pupil Teachers.

During 1920, 8 Candidates for Bursarships, 23 for Student Teacherships, and 24 for Junior Scholarships were medically examined and found fit by the School Medical Officer.

Examination of Children Before Entry to Special Schools.

| | |
|--------------|-------|
| Girls | 4 |
| Boys | 5 |
| | <hr/> |
| Total | 9 |
| | <hr/> |

Number of Children Examined Before Summer Camp.

| | |
|--------------|-------|
| Girls | 150 |
| Boys | 150 |
| | <hr/> |
| Total | 300 |
| | <hr/> |

TABLE I.—NUMBER OF CHILDREN INSPECTED 1ST JANUARY, 1920,
TO 31ST DECEMBER, 1920 (see page 7).

A.—ROUTINE MEDICAL INSPECTION.*

| Age. | Entrants. | | | | | Total. |
|-------------|-----------|---|------|---|-------------|--------|
| | 3 | 4 | 5 | 6 | Other Ages. | |
| Boys | | | 546 | | | 546 |
| Girls | | | 504 | | | 504 |
| Totals | | | 1050 | | | 1050 |

| Age. | Intermediate Group. | Leavers. | | | Other Ages. | Total. | Grand Total. |
|-------------|---------------------|----------|------|----|-------------|--------|--------------|
| | 8 | 12 | 13 | 14 | | | |
| Boys | 681 | | 686 | | | 1367 | 1913 |
| Girls | 661 | | 735 | | | 1396 | 1900 |
| Totals | 1342 | | 1421 | | | 2763 | 3813 |

B.—SPECIAL INSPECTIONS.

| | Special Cases.† | Re-Examinations (i.e. No. of Children Re-examined) |
|-----------------------------|-----------------|--|
| Boys..... } Girls..... } | 6104 | 2237 |
| Totals | 6104 | 2237 |

C.—TOTAL NUMBER OF *Individual Children* INSPECTED BY THE MEDICAL OFFICER,
WHETHER AS ROUTINE OR SPECIAL CASES (*no Child being counted
more than once in one Year*).

| No. of Individual Children inspected. |
|---------------------------------------|
| 9917 |

* *Routine Medical Inspection* is medical inspection carried out on the lines of the approved Schedule at the time when routine medical inspection is due and made on the school premises.

† “*Special Cases*” are those children specifically referred to the Medical Officer and not due for routine medical inspection under the Code at the time when specially referred. Such children may or may not be of Code-group age and may be referred to the Medical Officer at the school or the clinic by the Committee, Medical Officers, School Nurses, Teachers, Attendance Officers, Parents or otherwise. (See page 11.)

TABLE II.—RETURN OF DEFECTS FOUND IN THE COURSE OF MEDICAL INSPECTION IN 1920 (see page 8 *et seq.*).

This table is, except as regards the final line, a record of *defects* and not of individual children who are defective. For the sake of convenience cases of defect of Nose and Throat are included in one only of the sub-headings. (See also Table IVd.)

| Defect or Disease. | | Routine Inspections. | | Specials.* | |
|--------------------|---|--------------------------------|--|--------------------------------|--|
| | | Number referred for Treatment. | Number requiring to be kept under observation, but not referred for Treatment. | Number referred for Treatment. | Number requiring to be kept under observation, but not referred for Treatment. |
| (1) | | (2) | (3) | (4) | (5) |
| | Malnutrition..... | 6 | 11 | — | 1 |
| | Uncleanliness : | | | | |
| | Head..... | 242 | — | 22 | — |
| | Body..... | 64 | — | 3 | — |
| Skin | Ringworm : | | | | |
| | Head..... | 6 | — | 3 | — |
| | Body..... | 19 | — | 2 | — |
| | Scabies..... | 20 | — | — | — |
| | Impetigo..... | 71 | — | 28 | — |
| | Other diseases (non-Tubercular) | 70 | 2 | 17 | — |
| Eye | Blepharitis..... | 60 | — | 13 | — |
| | Conjunctivitis..... | 15 | — | 9 | — |
| | Keratitis..... | — | — | — | — |
| | Corneal Ulcer..... | 1 | — | 4 | — |
| | Corneal Opacities..... | 4 | — | 3 | — |
| | Defective Vision..... | 338 | 6 | 174 | 6 |
| | Squint..... | 34 | 1 | 36 | — |
| | Other Conditions..... | 1 | — | — | 2 |
| Ear | Defective Hearing..... | — | 2 | — | 2 |
| | Otitis Media..... | 34 | 1 | 26 | — |
| | Other Ear Diseases..... | 15 | — | 14 | — |
| Nose and Throat | Enlarged Tonsils..... | 238 | 34 | 31 | 1 |
| | Adenoids..... | 18 | — | 21 | — |
| | Enlarged Tonsils and Adenoids | 6 | — | 3 | — |
| | Other Conditions..... | 22 | 2 | 5 | 2 |
| | Enlarged Cervical Glands (Non-Tubercular) | 1 | — | — | — |

* See footnote † in Table I.

| (1) | | (2) | (3) | (4) | (5) |
|---------------------------------|-------------------------------|------|-----|-----|-----|
| Defective Speech..... | | — | 1 | — | 14 |
| Teeth—Dental Diseases..... | | 71 | — | 1 | — |
| Heart and Circulation. | Heart Disease : | | | | |
| | Organic..... | — | 2 | — | — |
| | Functional..... | 1 | 7 | — | — |
| Anæmia..... | | 11 | 5 | — | — |
| Lungs | Bronchitis..... | 37 | 2 | 3 | — |
| | Other Non-Tubercular Diseases | — | — | — | — |
| Tuber- culosis | Pulmonary : | | | | |
| | Definite..... | — | 1 | 2 | — |
| | Suspected..... | — | 2 | 1 | — |
| | Non-Pulmonary : | | | | |
| | Glands..... | — | 1 | 2 | 2 |
| | Spine..... | — | 1 | — | — |
| | Hip..... | — | — | — | — |
| | Other Bones and Joints.... | — | 1 | — | 1 |
| | Skin..... | — | 1 | — | — |
| | Other Forms..... | — | 1 | — | — |
| Nervous System | Epilepsy..... | — | 4 | — | — |
| | Chorea..... | 1 | 1 | 2 | 1 |
| | Other Conditions..... | — | — | — | 4 |
| Deform- ities | Rickets..... | — | 8 | — | 2 |
| | Spinal Curvature..... | — | 2 | — | 1 |
| | Other Forms..... | — | 6 | — | 2 |
| Other Defects and Diseases..... | | 3 | 8 | 6 | 6 |
| | | 1325 | | 427 | |

NUMBER OF *Individual Children* HAVING
DEFECTS WHICH REQUIRED TREATMENT
OR TO BE KEPT UNDER OBSERVATION..... 1752

TABLE III.—NUMERICAL RETURN OF ALL EXCEPTIONAL CHILDREN
IN THE AREA IN 1920 (see also. page 32).[^]

| | | Boys. | Girls. | Total. |
|--|---|-------|--------|--------|
| Blind (including partially blind). | Attending Public Elementary Schools. | 1 | — | 1 |
| | Attending Certified Schools for the Blind | 2 | 6 | 8 |
| | Not at School | 2 | — | 2 |
| Deaf and Dumb (including partially deaf). | Attending Public Elementary Schools. | — | — | — |
| | Attending Certified Schools for the Deaf. | 2 | 4 | 6 |
| | Not at School | — | 1 | 1 |

| | | | Boys. | Girls. | Total. |
|--------------------------|--|---|--------------------|--------|--------|
| Mentally Deficient. | Feeble Minded. | Attending Public Elementary Schools. | 2 | 1 | 3 |
| | | Attending Certified Schools for Mentally Defective Children. | — | — | — |
| | | Notified to the Local Control Authority by Local Education Authority during the Year. | — | — | — |
| | | Not at School | 6 | 7 | 13 |
| | Imbeciles. | At School | 1 (Special School) | | |
| | | Not at School | 8 | 4 | 12 |
| Epileptics. | Idiots. | | 2 | 2 | 4 |
| | | Attending Public Elementary Schools. | 4 | 7 | 11 |
| | | Attending Certified Schools for Epileptics. | — | — | — |
| | | In Institutions other than Certified Schools. | — | — | — |
| | | Not at School | 6 | 10 | 16 |
| Physically Defective. | Pulmonary Tuberculosis. | Attending Public Elementary Schools. | 34 | 23 | 57 |
| | | Attending Certified Schools for Physically Defective Children | — | — | — |
| | | In Institutions other than Certified Schools. | — | — | — |
| | | Not at School | 8 | 7 | 15 |
| | Crippling due to Tuberculosis. | Attending Public Elementary Schools. | 9 | 2 | 11 |
| | | Attending Certified Schools for Physically Defective Children | — | — | — |
| | | In Institutions other than Certified Schools. | 1 | — | 1 |
| | | Not at School | 6 | 2 | 8 |
| | Crippling due to causes other than Tuber- culosis, i.e., Paralysis, Rickets, Traumatism. | Attending Public Elementary Schools. | 25 | 26 | 51 |
| | | Attending Certified Schools for Physically Defective Children | — | — | — |
| | | In Institutions other than Certified Schools. | — | — | — |
| | | Not at School | 9 | 7 | 16 |

| | | Boys. | Girls. | Total. |
|--|--|-------|--------|--------|
| Other Physical Defectives, e.g., delicate and other children suitable for admission to Open-Air Schools; children suffering from severe heart disease. | Attending Public Elementary Schools. | 97 | 86 | *183 |
| | Attending Open-Air Schools... | — | — | — |
| | Attending Certified Schools for Physically Defective Children other than Open-Air Schools. | — | — | — |
| | Not at School | 29 | 30 | 59 |
| | | | | 479 |
| Dull or Backward.. | Retarded 2 years | — | — | 483 |
| | Retarded 3 years | — | — | 136 |

* This includes 143 Tuberculosis Cases, e.g., glands, etc., not causing crippling.

TABLE IV.—A. TREATMENT OF MINOR AILMENTS
(see also page 18).

| Disease or Defect. | Number of Children. | | | |
|---|------------------------|---|------------|--------|
| | Referred for Treatment | Under Local Education Authority's Scheme. | Otherwise. | Total. |
| <i>Skin—</i> | | | | |
| Ringworm-Head | 186 | 167 | 19 | 186 |
| Ringworm-Body | 127 | 126 | 1 | 127 |
| Scabies | 282 | 266 | 16 | 282 |
| Impetigo | 1304 | 1271 | 33 | 1304 |
| Minor Injuries | 186 | 168 | 18 | 186 |
| Other Skin Diseases | 164 | 144 | 20 | 164 |
| <i>Ear Diseases</i> | 87 | 85 | 2 | 87 |
| <i>Eye Diseases</i> (external and other). | 474 | 394 | 80 | 474 |
| <i>Miscellaneous</i> | 768 | 750 | 18 | 768 |

B.—TREATMENT OF VISUAL DEFECT (see also page 21).

| Number of Children. | | | | | | | | | |
|--------------------------|---|-------------------------------------|-------------|--------|-----------------------------------|---------------------------------|--|------------------------------------|---|
| Referred for Refraction. | Submitted to Refraction. | | | | For whom Glasses were Prescribed. | For whom Glasses were Provided. | Recommended for Treatment other than by Glasses. | Received other Forms of Treatment. | For whom no Treatment was considered necessary. |
| | Under Local Education Authority's Scheme Clinic or Hospital | By Private Practitioner or Hospital | Other-wise. | Total. | | | | | |
| *777 | 238 | 161 | 53 | 452 | 307 | 307 | 14 | 14 | 131 |

* 208 from previous year.

C.—TREATMENT OF DEFECTS OF NOSE AND THROAT (see also page 22).

| Number of Children. | | | | |
|-------------------------|--|--------------------------------------|--------|------------------------------------|
| Referred for Treatment. | Received Operative Treatment. | | | Received other Forms of Treatment. |
| | Under Local Education Authority's Scheme—Clinic or Hospital. | By Private Practitioner or Hospital. | Total. | |
| *529 | 199 | 40 | 239 | 139 |

* 191 from previous year.

D. TREATMENT OF DENTAL DEFECTS (see also page 23).

1. Number of Children dealt with in 1920.

ELEMENTARY SCHOOLS.

| | Age Groups | | | | | | | | | | "Specials." | Total. |
|--|------------|------|------|------|------|------|------|------|------|-----|-------------|--------|
| | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | | |
| (a) Inspected at School and Clinic | 206 | 1445 | 1400 | 1476 | 1422 | 1355 | 1475 | 1486 | 1101 | 163 | 1021 | 12550 |
| (b) Referred for treatment | 106 | 833 | 998 | 1072 | 1072 | 1065 | 939 | 947 | 572 | 93 | 1016 | 8713 |
| (c) Treatment accepted | 68 | 611 | 715 | 752 | 746 | 735 | 645 | 578 | 371 | 69 | 1016 | 6306 |
| (d) Presented for Treatment | 25 | 306 | 403 | 489 | 501 | 543 | 298 | 267 | 140 | 18 | 1016 | 4006 |
| (e) Re-treated* (result of periodical inspection). | 1 | 77 | 222 | 291 | 386 | 349 | 241 | 203 | 110 | 12 | 652 | 2544 |

SECONDARY SCHOOL.

| | Age Groups. | | | | | | | | | | "Specials." | Total. |
|--|-------------|---|----|----|----|----|----|----|----|----|-------------|--------|
| | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | | |
| (a) Inspected at School and Clinic | | | 1 | 18 | 56 | 74 | 64 | 53 | 17 | 9 | — | 292 |
| (b) Referred for treatment | | | 1 | 12 | 24 | 39 | 36 | 30 | 8 | 7 | — | 157 |
| (c) Treatment accepted | | | 1 | 9 | 21 | 23 | 10 | 2 | — | — | — | 66 |
| (d) Presented for Treatment | | | 1 | 7 | 15 | 9 | — | — | — | — | — | 32 |
| (e) Re-treated* (result of periodical inspection). | | | | 4 | 13 | 7 | — | — | — | — | — | 24 |

* It is understood that cases under this head are also included under (d) above.

2.—Particulars of time given and of operations undertaken in 1920.

| No. of Half-days devoted to Inspection. | No. of Half-days devoted to Treatment. | Total No. of Attendances made by the Children at the Clinic. | No. of Permanent Teeth | | No. of Temporary Teeth | | No. of Extractions under General Anæsthetics included in (4) and (6). | No. of other Operations. | |
|---|--|--|------------------------|---------|------------------------|---------|---|--------------------------|-------------------|
| | | | Ex-tracted. | Filled. | Ex-tracted. | Filled. | | Per-man-ent Teeth. | Tem-porary Teeth. |
| (1.) | (2.) | (3.) | (4.) | (5.) | (6.) | (7.) | (8.) | (9.) | (10.) |
| ELEMENTARY SCHOOLS. | | | | | | | | | |
| 174 | 323 | 4083 | 262 | 462 | 7017 | 444 | — | 814 | 35 |
| SECONDARY SCHOOL. | | | | | | | | | |
| 12 | 2 | 34 | 3 | 12 | 29 | 1 | — | 31 | — |

TABLE V.—SUMMARY OF TREATMENT OF DEFECTS AS SHEWN IN TABLE IV. (A, B, C, D).

| Disease or Defect. | Number of Children. | | | |
|---------------------------------|-------------------------|---|------------|--------|
| | Referred for Treatment. | Treated. | | |
| | | Under Local Education Authority's Scheme. | Otherwise. | Total. |
| Minor Ailments..... | 3578 | 3371 | 207 | 3578 |
| Visual Defects..... | *774 | 238 | 192 | 430 |
| Defects of Nose and Throat..... | ‡529 | 199 | 179 | 378 |
| Dental defects..... | 71 | 71 | — | 71 |
| Other defects..... | 76 | — | 76 | 76 |

* 208 from previous year.

‡ 191 from previous year.

TABLE VI.—SUMMARY RELATING TO CHILDREN MEDICALLY
INSPECTED AT THE ROUTINE INSPECTIONS DURING THE
YEAR 1920.

ELEMENTARY SCHOOLS.

| | |
|---|------|
| (1) The total number of children medically inspected at the routine inspections.* | 3813 |
| (2) The number of children in (1) suffering from— | |
| Malnutrition | 17 |
| Skin Disease | 188 |
| Defective Vision (including Squint) | 379 |
| Eye Disease | 81 |
| Defective Hearing | 2 |
| Ear Disease | 50 |
| Nose and Throat Disease | 320 |
| Enlarged Cervical Glands (non-tubercular) | 1 |
| Defective Speech | 1 |
| Dental Disease | 71 |
| Heart Disease— | |
| Organic | 2 |
| Functional | 8 |
| Anæmia | 16 |
| Lung Disease (non-tubercular) | 39 |
| Tuberculosis— | |
| Pulmonary { definite | 1 |
| suspected | 2 |
| Non-pulmonary | 5 |
| Disease of the Nervous System | 6 |
| Deformities | 16 |
| Other defects and diseases | 11 |
| (3) The number of children in (1) suffering from defects (other than uncleanness or defective clothing or foot-gear) who require to be kept under observation (but not referred for treatment). | 113 |
| (4) The number of children in (1) who were referred for treatment (excluding uncleanness, defective clothing, &c.). | 1103 |
| (5) The number of children in (4) who received treatment for one or more defects (excluding uncleanness, defective clothing, &c.). | 918 |

* "Specials" are not included in this Table.

SECONDARY SCHOOL. (See page .)

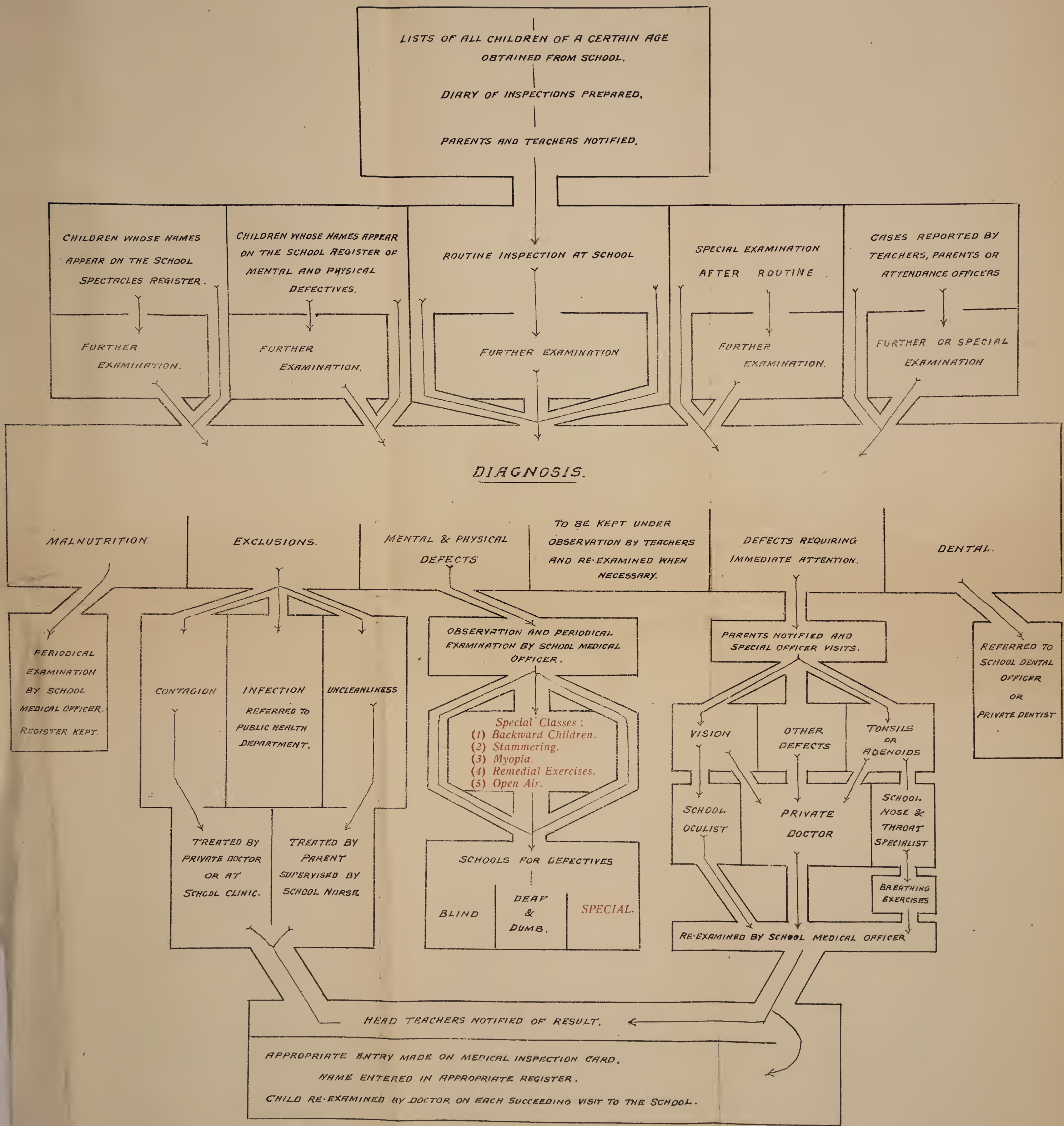
| | |
|--|-----|
| (1) Total number of individual children inspected | 199 |
| (2) The number of children in (1) suffering from— Defective Vision | 15 |
| Nose and Throat Disease | 2 |
| (3) The number of children in (1) to be kept under obser- vation, but not referred for treatment. | 3 |
| (4) The number of children in (1) who were referred for treatment. | 17 |
| (5) The number of children in (4) who received treatment | 0* |

* For explanation see page 49.

DIAGRAMMATIC REPRESENTATION OF THE SCHOOL MEDICAL SERVICE

IN WARRINGTON.*

(The portion of the Scheme printed in **RED** is not yet in operation.)



* I am indebted to the Director of Education (Mr. J. Moore Murray) for this Chart.

